386

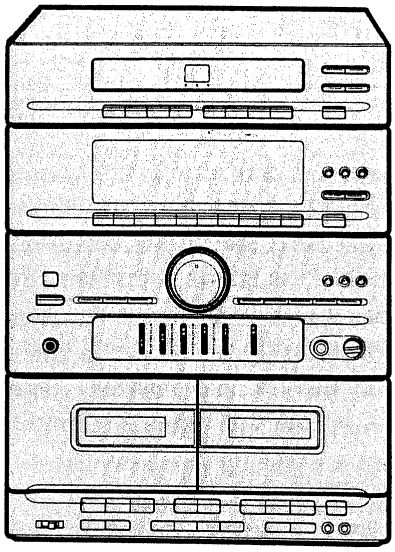
GoldStar

COMPACT DISC STEREO SYSTEM

SERVICE MANUAL

CAUTION

BEFORE SERVICING THE CHASSIS, READ THE "SAFETY PRECAUTION" IN THIS MANUAL.



MODEL : FFH-303L

GoldStar

386

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SAFETY PRECAUTION

Many electrical and mechanical parts in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this manual, electrical components having such features are identified by a ⚠ in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts which do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING//

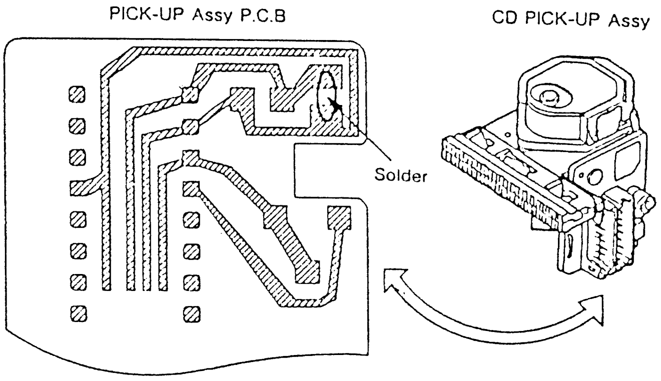
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A

SERVICE INSTRUCTIONS

PRECAUTION TO REPLACE OPTICAL BLOCK

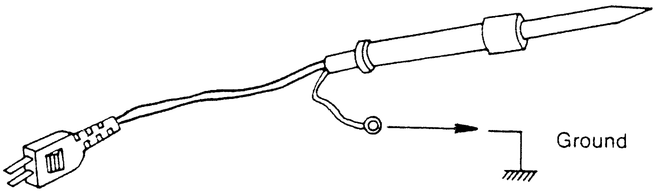
Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in right figure.



To prevent electrostatic breakdown, laser diode and ground are connected with solder.

NOTE : When removing solder, be sure to use a grounded solder-iron, to prevent electrostatic breakdown.



CAUTION FOR HANDLING THE OPTICAL PICK-UP

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. So, when handling a pick-up, the procedure for grounding as follows is required to prevent damage caused by static electricity.

1. Grounding For Human Body.
   Be sure to put on a wrist-strap for grounding (with impedance lower than $10^8\Omega$) whose other end is grounded. The strap works to drain away the static electricity build-up on the human body.
2. Grounding For the Work Table.
   Be sure to lay on the table a conductive sheet (with impedance lower than $10^9\Omega$) such as a sheet of copper, which is grounded.
3. As static electricity build-up on clothes is not drained away, be careful not to let your clothes touch the pick-up.

SPECIFICATIONS

1. AMP SECTION

① Power Output (6Ω, 2 channel,THD 10%)	20W+20W
② T.H.D	0.2%
③ Frequency Response (3dB down)	40Hz~20kHz
④ Signal-to-noise Ratio AUX/PHONO	90dB/75dB
⑤ Tone control	100Hz, 350Hz, 1kHz, 3.5kHz, 10kHz
⑥ Input Impedance	47kΩ
⑦ Input Sensitivity AUX/PHONO	200mV/4mV
⑧ Crosstalk 100Hz/1kHz/10kHz	60dB/60dB/40dB

2. TUNER SECTION

1) FM

① Frequency Range (100kHz step)	87.5MHz~108MHz
② Intermediate Frequency	10.7MHz
③ Sensitivity 90.1MHz, 98.1MHz, 106.1MHz	10dB
④ Signal-to-noise Ratio 98.1MHz (Mono/Stereo)	75dB/70dB
⑤ Image Rejection 106.1MHz	45dB
⑥ IF Rejection 90.1MHz	80dB
⑦ Distortion	0.5%
⑧ Frequency Response (−3dB)	30Hz~15,000Hz
⑨ Stereo Separation 100kHz/1kHz/10kHz	40dB/40dB/35dB

2) MW

① Frequency Range	522kHz~1,611kHz
② Intermediate Frequency	450kHz
③ Usable Sensitivity	50dB
④ Image Rejection 1,404kHz	35dB
⑤ IF Rejection 603kHz	40dB
⑥ Selectivity	35dB
⑦ Signal-to-noise Ratio	40dB
⑧ Distortion	1.5%
⑨ Frequency Response (−6dB)	125Hz~1,800Hz

3) LW

① Frequency Range	531kHz~281kHz
② Intermediate Frequency	450kHz
③ Usable Sensitivity 164kHz, 200kHz, 254kHz	60dB
④ Image Rejection 200kHz	30dB
⑤ Selectivity 198kHz	35dB
⑥ Signal-to-noise Ratio	35dB
⑦ Frequency Response	100kHz~1,800kHz

3. DECK SECTION

① Tape Speed	9.5cm/sec
② Wow and Flutter	0.1%
③ Rewind and Fast Forward Time	120sec
④ Frequency Response (5dB Range)	100Hz～12.5kHz
⑤ Signal-to-noise Ratio	51dB
⑥ Distortion (Playback/Record)	1%/1.5%
⑦ Cross Talk	60dB
⑧ Separation	35dB
⑨ Erase Ratio	65dB

4. CDP SECTION

① Frequency Response	50Hz～20kHz
② Signal-to-noise Ratio	80dB
③ Dynamic Range	80dB
④ THD	0.2%
⑤ Separation	50dB

5. GENERAL

① Power Requirement	AC230V, 50Hz
② Power Consumption	90W
③ Dimension (Net : W×H×D)	270 × 356 × 300(mm)
④ Weight (Net)	9.2kg

NOTE : Specifications are subject to change without notice in the course of product improvement.

ADJUSTMENTS

This set has been aligned at the factory and normally will not require further adjustment. As a result, it is not recommened that any attempt is made to modificate any circuit. If any parts are replaced or if anyone tampers with the adjustment, realignment may be necessary.

IMPORTANT

1. Check power-source voltage.
2. Set the function switch to band being aligned.
3. Turn volume control to minimum unless otherwise noted.
4. Keep the signal input as low as possible to avoid AGC and AFC action.
5. Standard modulation is following.

Item Band	Modulation	Modulation Frequency
AM	400Hz	30%
FM	1kHz	100% (75kHz Dev.)

TEST AND ADJUSTMENT POINT

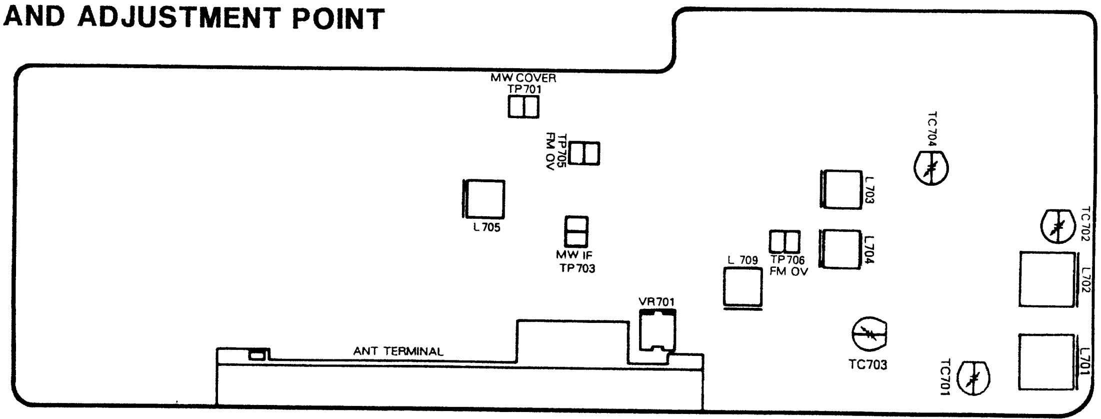

MW COVER
TP701
TP705
FM OV
L705
MW IF
TP703
VR701
ANT TERMINAL
L 709
TP706
FM OV
L703
L704
TC704
TC702
L702
TC703
TC701
L701

Fig. 1. TUNER P.C. BOARD

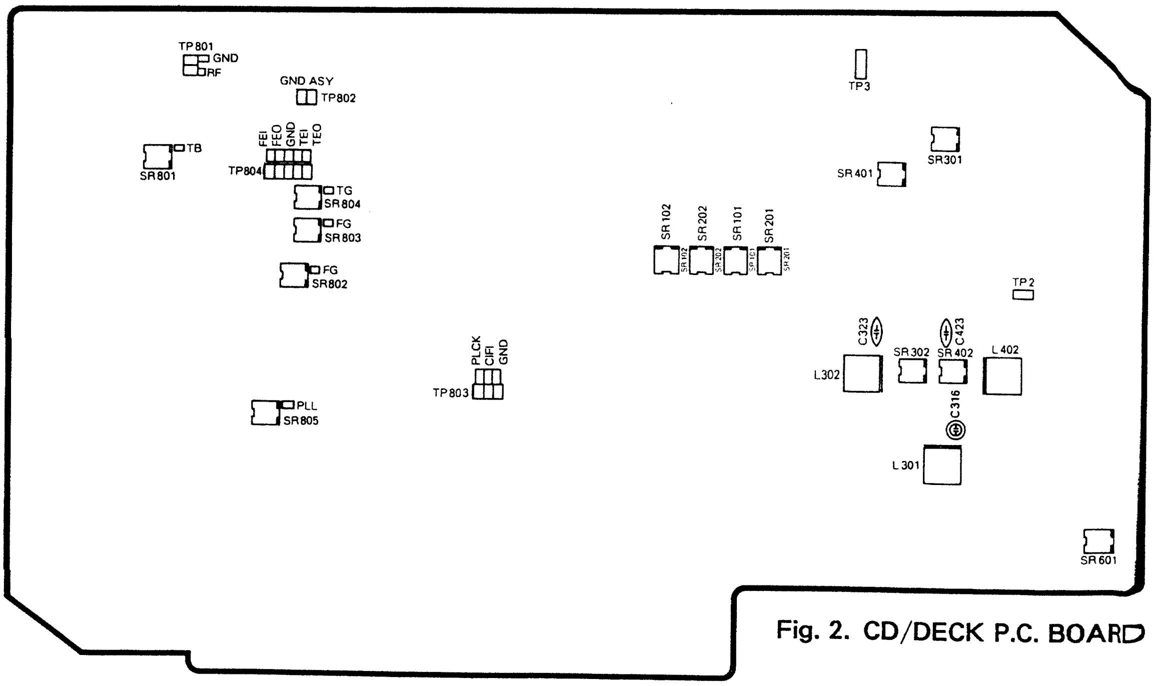

TP801
GND
RF
GND ASY
TP802
TB
SR801
FEI
FEO
GND
TEI
TEO
TP804
TG
SR804
FG
SR803
FG
SR802
PLCK
CIFI
GND
TP803
PLL
SR805
TP3
SR301
SR401
SR102
SR202
SR101
SR201
TP2
C323
C423
SR302
SR402
L402
L302
C316
L301
SR601

Fig. 2. CD/DECK P.C. BOARD

TUNER ADJUSTMENTS

1. MW IF ADJUSTMENT

IF Genescope……Connect the input to TP703, output to AM antenna.
Adjust for the IF waveform of genescope to be maximum.

IF	Adjust for	Adjustment
450kHz	Maximum	L709

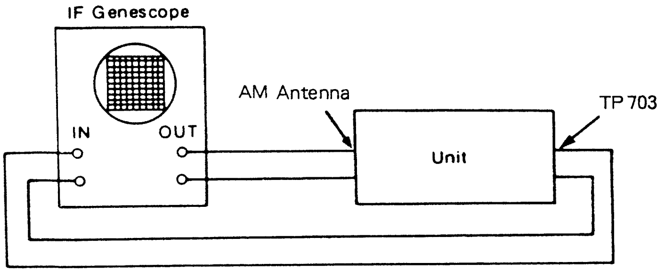

IF Genescope
IN
OUT
AM Antenna
TP 703
Unit

Fig. 3. MW IF Adjustment Connection Diagram

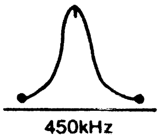


Fig. 4. MW IF Curve

2. MW COVERAGE ADJUSTMENT

DC Voltmeter……Connect between TP701 and GND.

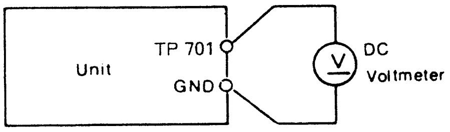

Unit
TP 701
GND
V
DC
Voltmeter

Fig. 5. MW Coverage Adjustment Connection Diagram

Step	Frequency	Adjust for	Adjustment
1	530kHz	1.6V	L703
2	1,720kHz	8.5V	TC704
3	Repeat step1 several times.		

3. MW TRACKING ADJUSTMENT

Signal Generator……Connect the MW antenna coil through the loop antenna.
Adjust for the indication of electronic voltmeter and the waveform of oscilloscope to be maximum.

Step	Frequency	Adjust for	Adjustment
1	600kHz	Maximum sensitivity	L702
2	1,400kHz	Maximum sensitivity	TC702
3	Repeat steps 1 and 2 several times.		

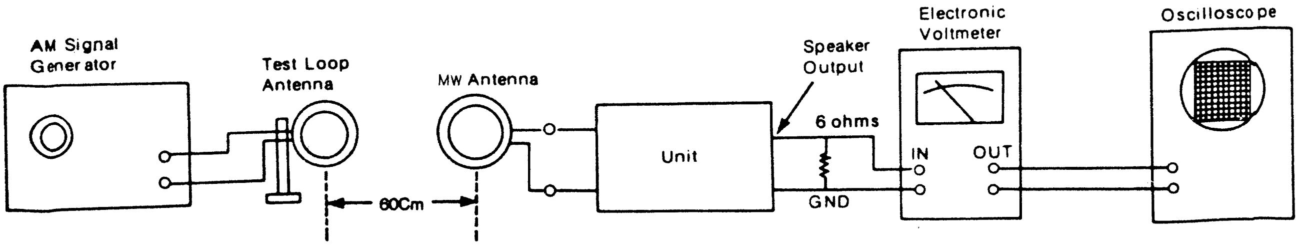

AM Signal Generator
Test Loop Antenna
MW Antenna
60Cm
Unit
Speaker Output
6 ohms
GND
Electronic Voltmeter
IN
OUT
Oscilloscope

Fig. 6. MW Tracking Adjustment Connection Diagram

4. LW COVERAGE ADJUSTMENT

DC Voltmeter……Connect between TP701 and GND.

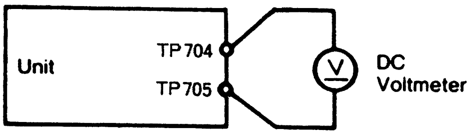

Unit
TP704
TP705
V
DC
Voltmeter

Fig. 7. LW Coverage Adjustment Connection Diagram.

Step	Frequency	Adjust for	Adjustment
1	153kHz	2.6V	L704
2	281kHz	7V	TC703
3	Repeat step 1 several times.		

5. LW TRACKING ADJUSTMENT

Signal Generator……Connect the LW antenna coil through the loop antenna.
Adjust for the indication of electronic voltmenter and the waveform of oscilloscope to be maximum.

Step	Frequency	Adjust for	Adjustment
1	164kHz	Maximum sensitivity	L701
2	254kHz	Maximum sensitivity	TC701
3	Repeat steps 1 and 2 several times.		

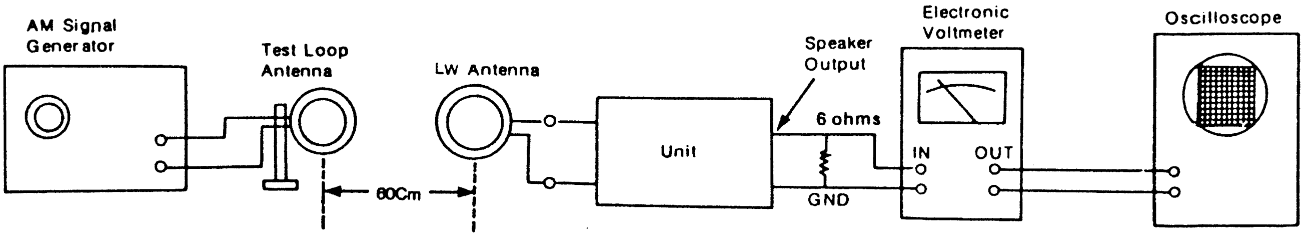

AM Signal Generator
Test Loop Antenna
LW Antenna
60Cm
Unit
Speaker Output
6 ohms
GND
Electronic Voltmeter
IN
OUT
Oscilloscope

Fig. 8. LW Tracking Adjustment Connection Diagram.

6. FM OV ADJUSTMENT

DC Voltmeter……Connect between TP704 and TP705.

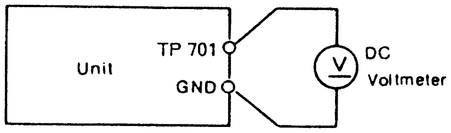

Unit
TP 701
GND
V
DC
Voltmeter

Fig. 9. FM OV Adjustment Connection Diagram

Step	Frequency	Adjust for	Adjustment
1	98MHz	DC 0V±10mV	L705
2	Repeat step 1 several times.		

7. FM MPX ADJUSTMENT-SEPARATION

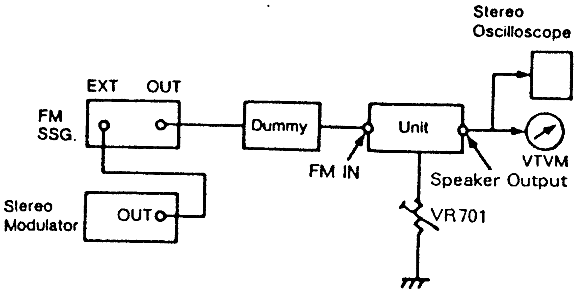

Stereo Oscilloscope
EXT
OUT
FM SSG.
Dummy
Unit
FM IN
VTVM
Speaker Output
VR701
Stereo Modulator
OUT

Fig. 10. FM MPX Adjustment Connection Diagram

Pilot Signal	Adjust for	Adjustment
ON	Difference of R and L must be maximum.	VR701

NOTE : In case of adjusting the stereo separation, if input is L (or R) channel, R (or L) channel must be maximum.

TAPE DECK ADJUSTMENTS

1. AZIMUTH ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Deck A, B	Playback	MTT-114	TP3	Head screw	R/L Maximum	Foward : Lefthand side screw Reverse : Righthand side screw

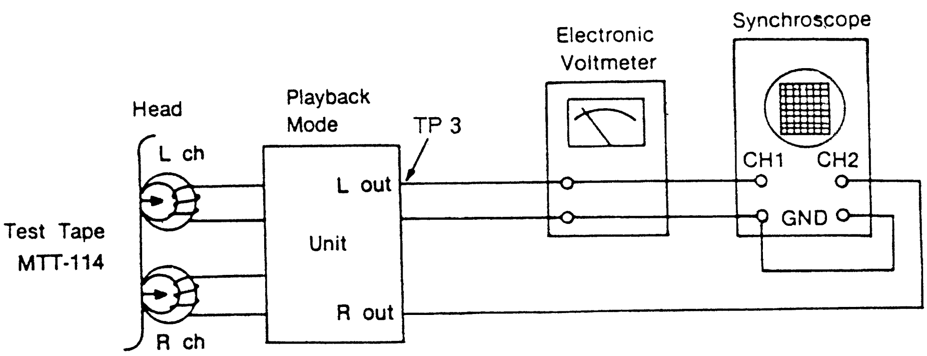

Dual-Trace Synchroscope
Electronic Voltmeter
Head
Playback Mode
TP 3
L ch
L out
CH1
CH2
GND
Test Tape MTT-114
Unit
R out
R ch

Fig. 11. Azimuth Adjustment Connection Diagram

2. MOTOR SPEED ADJUSTMENT

Item	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Normal Speed	Playback	MTT-111	TP3	SR601	3kHz±15Hz	After adjusting in forward, confirm the specification in reverse mode.

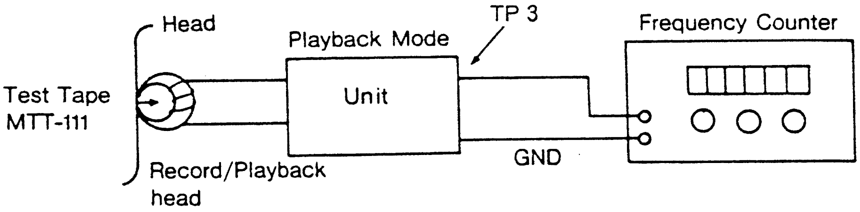

Head
TP 3
Playback Mode
Frequency Counter
Test Tape MTT-111
Unit
GND
Record/Playback head

Fig. 12. Motor Speed Adjustment Connection Diagram

3. PLAYBACK LEVEL ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Deck A	Playback	MTT-150	TP3	SR102, SR202	580mV±1dB	After adjusting in forward, confirm the specification in reverse mode.
Deck B	Playback	MTT-150	TP3	SR101, SR201	580mV±1dB	

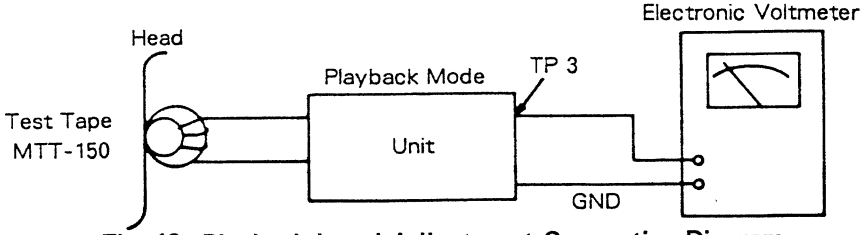

Electronic Voltmeter
Head
Playback Mode
TP 3
Test Tape MTT-150
Unit
GND

Fig. 13. Playback Level Adjustment Connection Diagram

4. RECORD BIAS ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Deck B	Rec/Pause	MTT-5561	Both side of C316	L301	100kHz±5kHz	Deck A : Stop RIF SW(SW650) : "1" Position

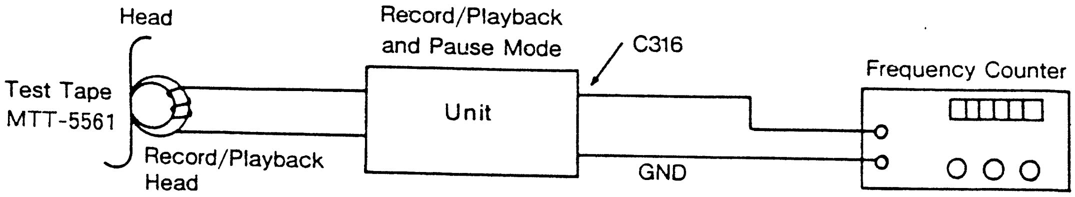

Head
Test Tape
MTT-5561
Record/Playback
Head
Record/Playback
and Pause Mode
Unit
C316
GND
Frequency Counter

Fig. 14. Record Bias Adjustment Connection Diagram

5. BIAS TRAP ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Deck B	Rec/Pause	MTT-5561	C423	L402	Minimum	Deck A : Stop
			C323	L302		

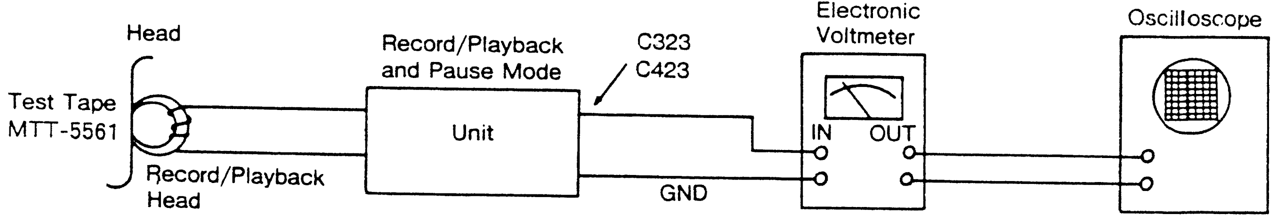

Head
Test Tape
MTT-5561
Record/Playback
Head
Record/Playback
and Pause Mode
Unit
C323
C423
GND
Electronic
Voltmeter
IN
OUT
Oscilloscope

Fig. 15. Bias Trap Adjustment Connection Diagram

6. RECORD/LEVEL ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Input	Output	Adjust for	Remark
Deck A	Stop	–	TP3	SR301 SR401	400Hz 200mV (at R/P)	290mV (at PB)	±0.5dB	● Dolby OFF ● Normal Speed ● After adjusting in MTT-5511, confirm in MTT-5561.
Deck B	R/P→PB	MTT-5511 MTT-5561						

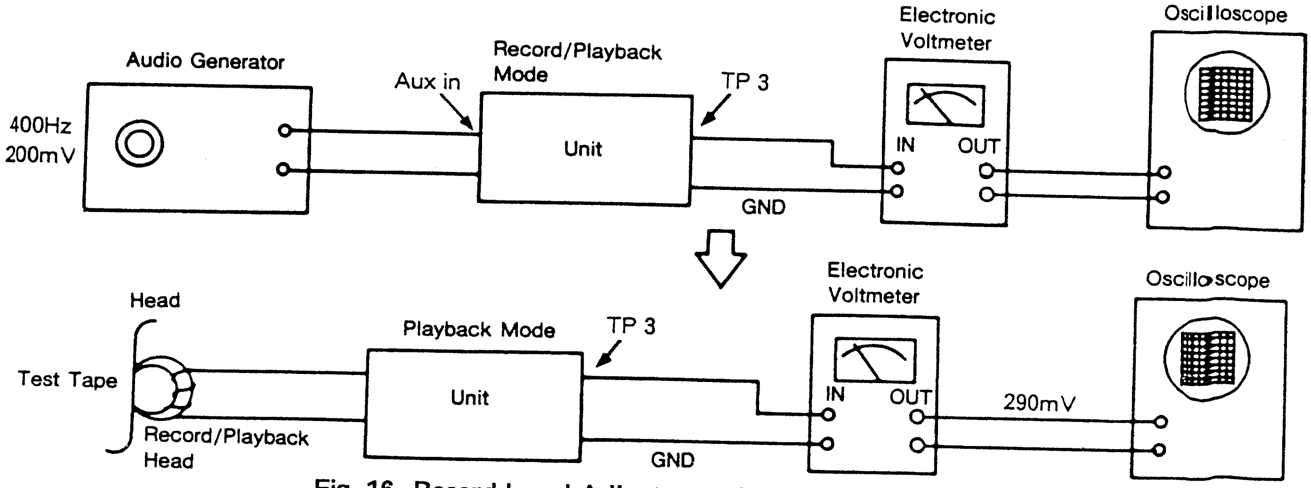

Audio Generator
400Hz
200mV
Aux in
Record/Playback
Mode
Unit
TP 3
GND
Electronic
Voltmeter
IN
OUT
Oscilloscope
Head
Test Tape
Record/Playback
Head
Playback Mode
Unit
TP 3
GND
Electronic
Voltmeter
IN
OUT
290mV
Oscilloscope

Fig. 16. Record Level Adjustment Connection Diagram

7. BIAS ADJUSTMENT

Deck	Deck Mode	Test Tape	Test Point	Adjustment	Adjust for	Remark
Deck A	Stop	—	TP3	SR402 SR302	Adjust for the response of 1kHz / 10kHz flat	After adjusting in MTT-5511, confirm in MTT-5561.
Deck B	R/P→PB	MTT-5511 MTT-5561				

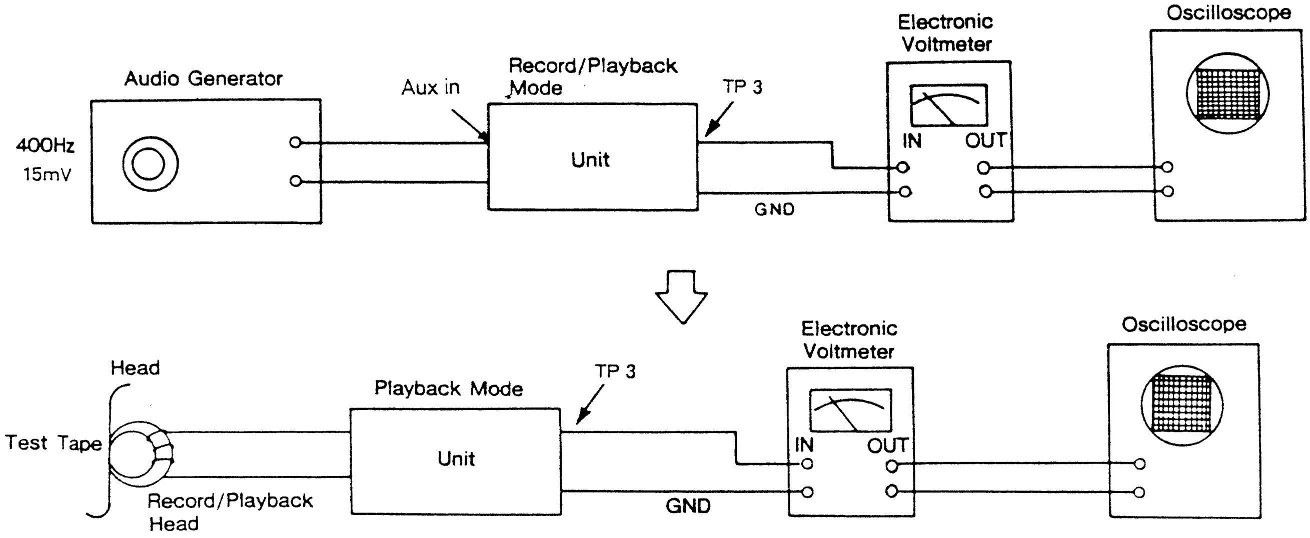
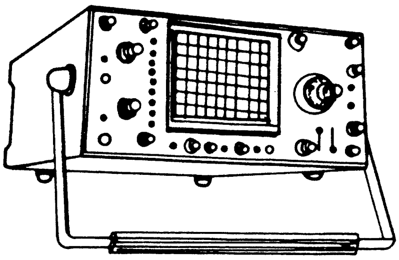

Audio Generator
400Hz
15mV
Aux in
Record/Playback Mode
Unit
TP 3
GND
Electronic Voltmeter
IN
OUT
Oscilloscope
Head
Test Tape
Record/Playback Head
Playback Mode
Unit
TP 3
GND
Electronic Voltmeter
IN
OUT
Oscilloscope

Fig. 17. Bias Adjustment Connection Diagram

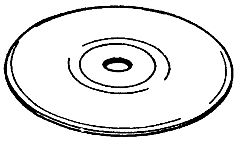
CDP ADJUSTMENTS

1. METER AND JIG FOR ADJUSTMENT

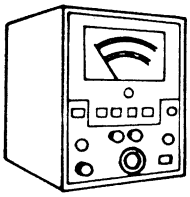
1-1. Oscilloscope



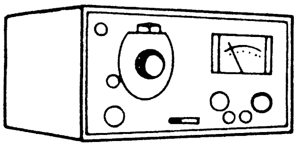
1-2. Test disc
(Sony type 4: YEDS-18)



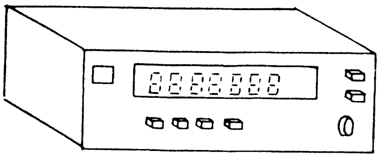
1-3. Jitter meter



1-4. Low frequency oscillator

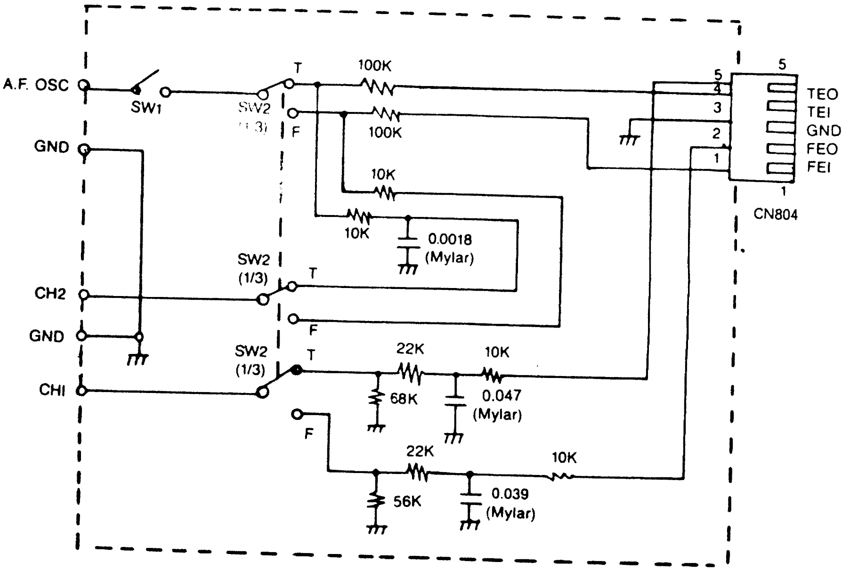


1-5. Digital frequency counter



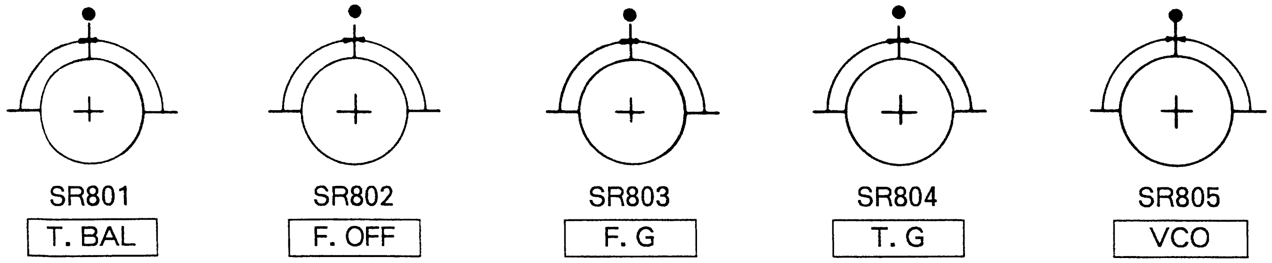
1-6. 10:1 Oscilloscope probe
1:1 Oscilloscope probe

1-7. Focus & tracking gain adjustment jig


A.F. OSC
SW1
SW2 (1/3)
T
F
100K
100K
10K
10K
0.0018 (Mylar)
GND
CH2
GND
CHI
22K
10K
68K
0.047 (Mylar)
22K
10K
56K
0.039 (Mylar)
5
4
3
2
1
TEO
TEI
GND
FEO
FEI
CN804

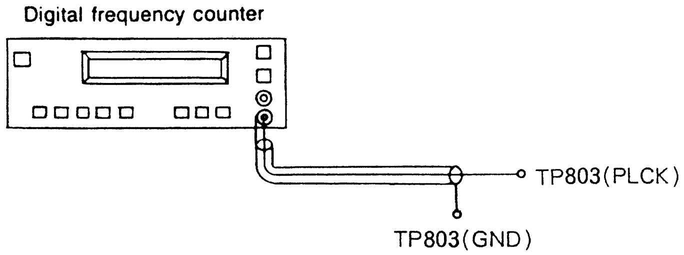
2. INITIAL SETTING OF ADJUSTMENT POTENTIOMETERS

Before adjusting, preset adjustment potentiometers like below.


SR801
T. BAL
SR802
F. OFF
SR803
F. G
SR804
T. G
SR805
VCO

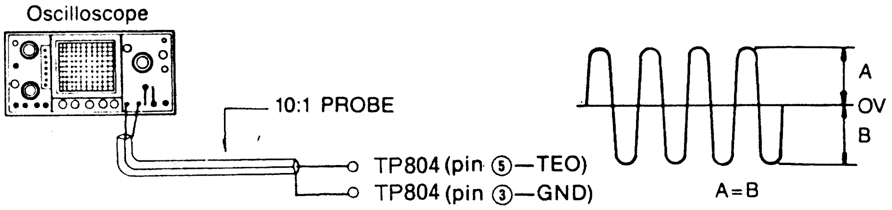
3. PLL (VCO) ADJUSTMENT

(1) Connect digital frequency counter to TP803 (PLCK) and TP803 (GND).
(2) Shortcircuit TP802 (ASY) and TP802 (GND).
(3) Adjust SR805 so that the frequency counter reading becomes 4.5MHz (±10kHz).


Digital frequency counter
TP803(PLCK)
TP803(GND)

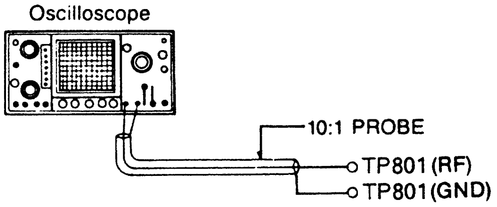
4. E-F BALANCE ADJUSTMENT

(1) Connect the oscilloscope to TP804 (pin⑤-TEO) and TP804 (pin ③-GND).
(2) Place test disc on turntable.
(3) Shortcircuit TP804 (pin ④-TEI) and TP804 (pin ③-GND).
(4) Adjust SR801 so that the amplitude above and below the zero DC line becomes equal (amplitude A=B).
(5) Open circuit TP804 (pin ④-TEI) and TP804 (pin ③-GND).


Oscilloscope
10:1 PROBE
TP804 (pin ⑤—TEO)
TP804 (pin ③—GND)
A
OV
B
A=B

5. FOCUS OFFSET ADJUSTMENT (without jitter meter)

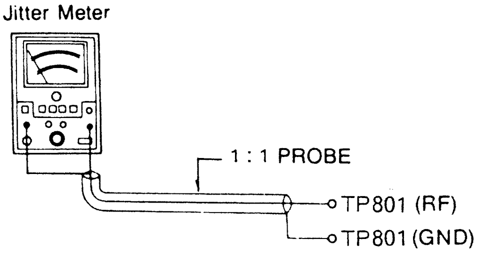
(1) Place test disc on the turntable.
(2) Put unit into play mode.
(3) Connect oscilloscope to TP801 (RF) and TP801 (GND).
(4) Adjust SR802 so that eye pattern become clear and waveform (V_{P-P}) is maximum.


Oscilloscope
10:1 PROBE
TP801 (RF)
TP801 (GND)

NOTE : When confirming eye pattern, you have to use 10:1 probe.

6. FOCUS OFFSET ADJUSTMENT (with jitter meter)

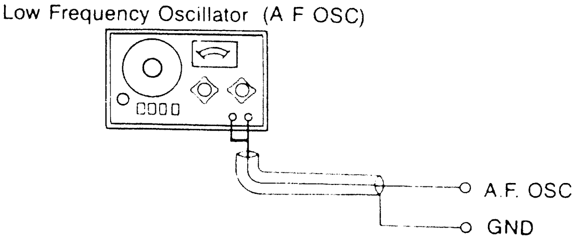
(1) Connect the jitter meter to TP801 (RF) and TP801 (GND), set the input selection switch of jitter meter to position of "×1".
(2) Place test disc on the turntable.
(3) Put unit into play mode.
(4) Adjust SR802 so that the jitter meter reading is minimum.


Jitter Meter
1 : 1 PROBE
TP801 (RF)
TP801 (GND)

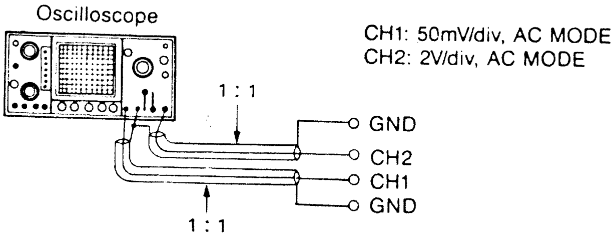
NOTE : Jitter meter must have input "×1" made selection switch.

7. FOCUS GAIN ADJUSTMENT (with jig)

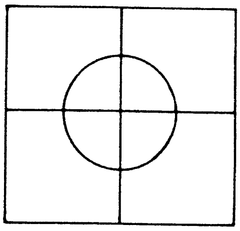
(1) Connect CN804 from gain adjustment jig to TP804 on the main P.C. board pin to pin.
(2) Connect audio frequency oscillator to A.F. OSC terminal and GND on the gain adjustment jig. Set the audio frequency oscillator output to 650 Hz, 4 V_{RMS}.


Low Frequency Oscillator (A F OSC)
A.F. OSC
GND

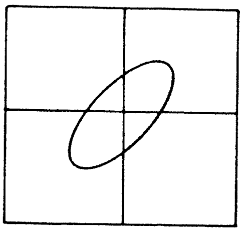
(3) Connect oscilloscope to CH1, CH2, and GND on the main P.C. board.


Oscilloscope
CH1: 50mV/div, AC MODE
CH2: 2V/div, AC MODE
1 : 1
GND
CH2
CH1
GND
1 : 1

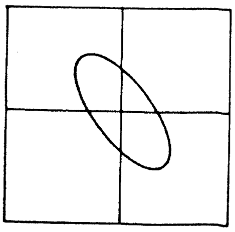
(4) Insert test disc and put unit into play mode on track.
(5) Set switch SW2 on the gain adjustment jig to the position of "F".
(6) Set switch SW1 on.
(7) Adjust SR803 so that the waveform on the oscilloscope becomes like below.



Good adjustment
(Optimum focus gain)



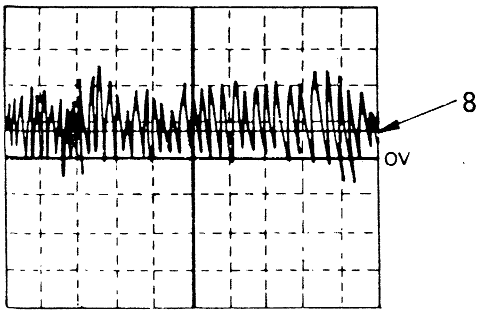
Bad adjustment
(In the case of low focus gain)



Bad adjustment
(In the case of high focus gain)

8. FOCUS GAIN ADJUSTMENT (without jig)

(1) Connect the oscilloscope to TP804 (pin ②-FEO) and TP804 (pin ⑤-GND)
(2) Insert test disc and put unit into play mode on track.
(3) Adjust SR803 so that the waveform on the oscilloscope becomes like below.

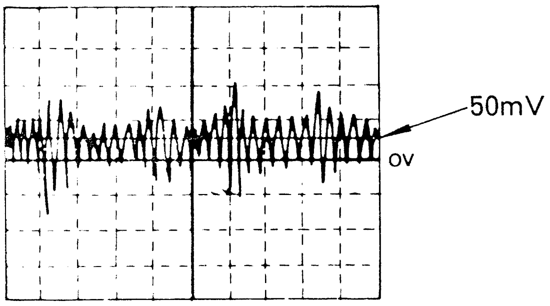


100mV/div.: Volt/div.
2mS/div.: Time/div.

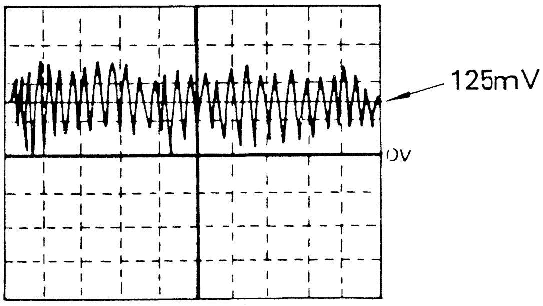
80mV (The DC level of FEO waveform)

NOTE : According to SR803 setting position, DC level of waveform varies.

Good adjustment
(Optimum focus gain)



Bad adjustment
(In the case of high focus gain)



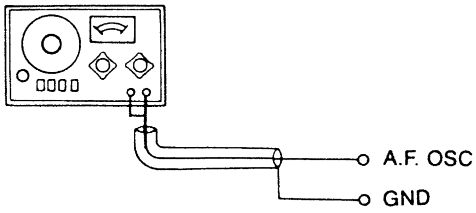
Bad adjustment
(In the case of low focus gain)

(4) This method will be convenient in the field. In spite of simple method, this method will not make serious problems.

9. TRACKING GAIN ADJUSTMENT (with jig)

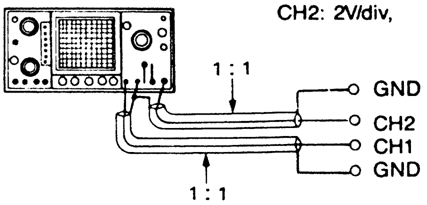
(1) Connect CN804 from gain adjustment jig to TP804 on the main P.C. board pin to pin.
(2) Connect audio frequency oscillator to A.F. OSC terminal and GND on the gain adjustment jig. Set the audio frequency oscillator output to 650Hz, 4 V_{RMS}.

Low Frequency Oscillator (A F OSC)



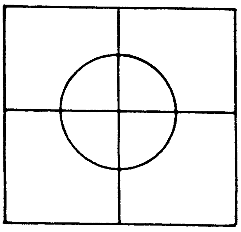
(3) Connect oscilloscope to CH1, CH2 and GND on the main P.C. board.

Oscilloscope

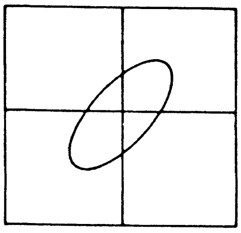


CH1: 50mV/div, AC MODE
CH2: 2V/div, AC MODE

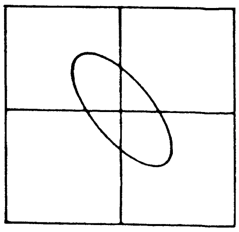
(4) Insert test disc and put unit into play mode on track.
(5) Set switch SW2 on the gain adjustment jig to the position of “T”.
(6) Set switch SW1 on.
(7) Adjust SR804 so that the waveform on the oscilloscope becomes like below.



Good adjustment
(Optimum tracking gain)



Bad adjustment
(In the case of low tracking gain)

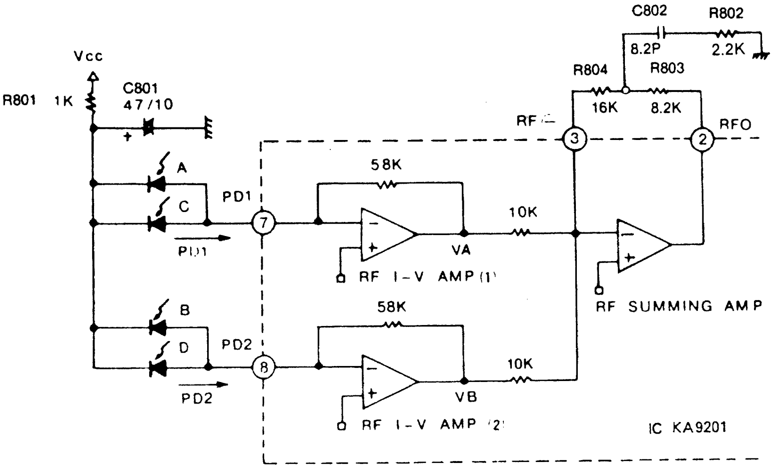


Bad adjustment
(In the case of high tracking gain)

DESCRIPTION OF FUNCTIONS

1. RF AMPLIFIER

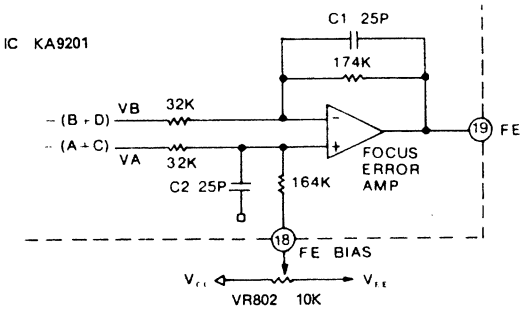
RF I-V amplifiers (1) and (2) are converted to voltage from the signal current of pin photodiodes connected to PD1 and PD2 through the 58KΩ equivalent resistance. Furthermore, it is added in the RF summing amplifier and (A+B+C+D) is output at RFO. At this pin (RFO), the eye pattern can be checked.


C802
R802
8.2P
2.2K
Vcc
R804
R803
R801 1K
C801
47/10
16K
8.2K
RF –
③
②
RFO
A
C
PD1
58K
⑦
10K
PD1
VA
RF I-V AMP (1)
B
58K
RF SUMMING AMP
D
PD2
⑧
10K
PD2
VB
RF I-V AMP (2)
IC KA9201

The RF amplifier output voltage (low-frequency) is $V_{RFO} = 2.2 \times (V_A + V_B) = 127.6K\Omega \times (iPD1 + iPD2)$.(at RFO)

2. FOCUS ERROR AMPLIFIER

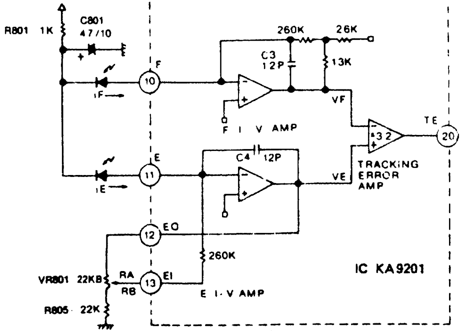
The Focus Error Amplifier is the difference between RF I-V amplifier (1) output (A+C) and RF I-V amplifier (2) output (B+D). The output becomes (A+C−B−D).


C1 25P
IC KA9201
174K
VB 32K
–(B+D)
–(A+C)
VA 32K
C2 25P
164K
FOCUS ERROR AMP
⑲ FE
⑱ FE BIAS
Vcc
Vee
VR802 10K

The FE amplifier output voltage (low-frequency) is $V_{FE} = 5.4 \times (V_A - V_B) = (iPD2 - iPD1) \times 315.4K\Omega$

Note) Maximum common mode rejection is delivered when the composite impedance to GND is about 10KΩ at the external VR of pin ⑱ (VR resistance is about 40KΩ).

3. TRACKING ERROR AMPLIFIER


Vcc
R801 1K
C801 47/10
260K
26K
C3 12P
13K
F
⑩
iF
VF
F I V AMP
TE
⑳
32
E
C4 12P
⑪
iE
VE
TRACKING ERROR AMP
⑫ EO
260K
IC KA9201
VR801 22KB
RA
RB
⑬ EI
E I-V AMP
R805 22K

E I-V amplifier and F I-V amplifier are converted to voltage from the signal current of pin photodiode connected : E and F. The E and F I-V amplifiers output voltage is,

$V_F = iF \times 403K\Omega$, and

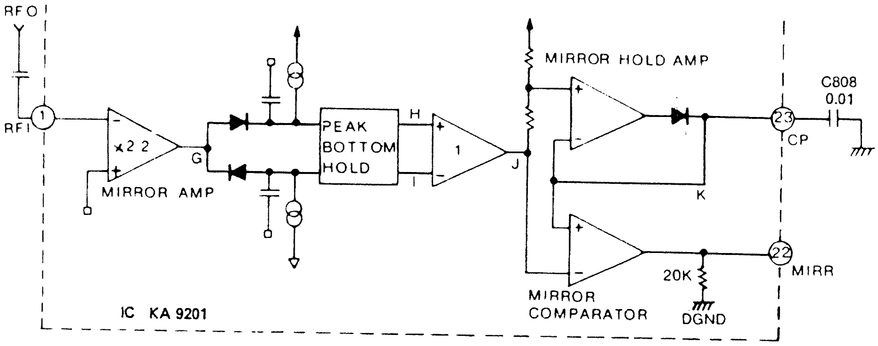
$V_E = iE \times 260K\Omega \times R_A/(R_B+22K) + (R_A+260K)$.

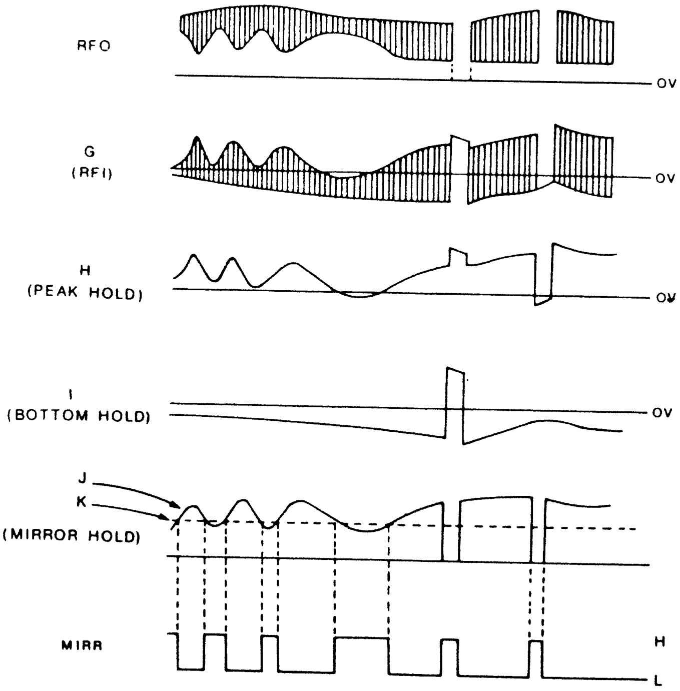
The tracking error amplifier is the difference between the E I-V amplifier output and the F I-V amplifier output, this output is (E-F).

$$V_{TE} = (V_E - V_F) \times 3.2$$
$$= (iE - iF) \times 1290K\Omega$$

4. MIRROR CIRCUIT

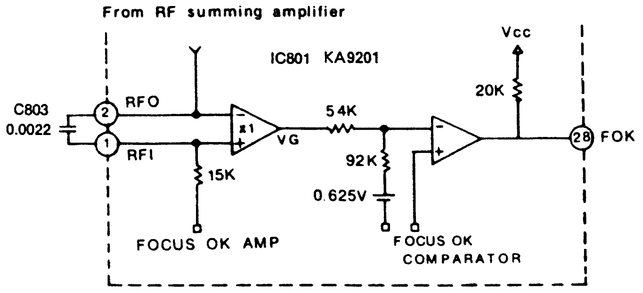
This circuit, after amplifying the RFI signal, holds its bottom and peak. The peak hold is done with a time constant able to track down a 30KHz traverse and the bottom hold. This is done with a time constant able to track down envelope fluctuations in the revolving cycle.


RFO
RFI
1
x2 2
G
MIRROR AMP
PEAK
BOTTOM
HOLD
H
I
1
J
MIRROR HOLD AMP
K
23
CP
C808
0.01
22
MIRR
20K
MIRROR
COMPARATOR
DGND
IC KA 9201


RFO
0V
G
(RFI)
0V
H
(PEAK HOLD)
0V
I
(BOTTOM HOLD)
0V
J
K
(MIRROR HOLD)
MIRR
H
L

With the differential amplification of these peak and bottom hold signals, H and I, the envelope signal J (demodulated to DC) is obtained. Two-thirds of the peak value of this signal J is held with a large time constant for the signal K. When K is compared with J, a mirror output is obtained. That is, the mirror output gives "L" on the disc track, "H" between tracks (mirror section) and also "H" in the defect detection. The time constant for the mirror hold must be sufficiently larger than that of the traverse signal.

5. FOCUS OK CIRCUIT


From RF summing amplifier
IC801 KA9201
Vcc
20K
C803
0.0022
RFO
RFI
x1
VG
5.4K
92K
15K
0.625V
FOK
FOCUS OK AMP
FOCUS OK COMPARATOR

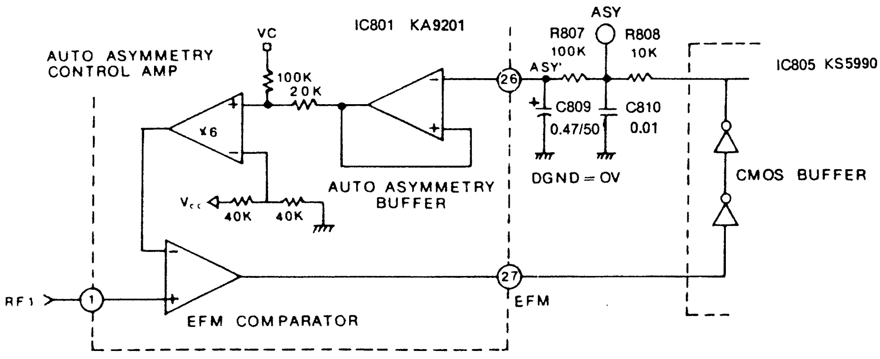
The focus OK circuit generates a timing window to lock on the focus servo from a focus search status. Pin ① will get the HPF (High Pass Filter) output from an RF signal from Pin ②-the LPF (Low Pass Filter) output (opposit phase) for the focus OK amplifier output.

The focus OK amplifier output is inverted when $V_{RFI}-V_{RFO} \fallingdotseq -0.37V$.

C803 is for determining the time constants of HPF in the EFM comparator and mirror circuits as well as LPF in the focus OK amplifier. When $0.0022\mu F$ is selected for C803, fc (cut-off frequency) = 1KHz, prevents the block error rate from degenerating as a damaged RF envelope results from the scratched disc, etc.

6. EFM COMPARATOR

The EFM comparator changes RF signal into a binary value. As the asymmetry generated due to variations in disc manufacturing cannot be eliminated by the AC coupling alone, the reference voltage of EFM comparator is controlled utilizing the fact that the generation probability of 1, 0 is 50% each in the binary EFM signals.

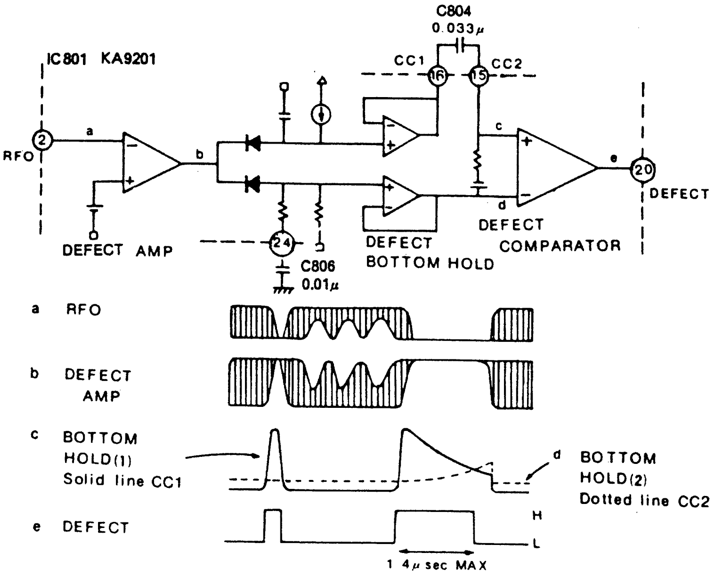

AUTO ASYMMETRY CONTROL AMP
VC
IC801 KA9201
100K
20K
x6
Vcc
40K
40K
AUTO ASYMMETRY BUFFER
ASY
R807
100K
R808
10K
ASY'
26
C809
0.47/50
C810
0.01
DGND = OV
IC805 KS5990
CMOS BUFFER
RF1
1
27
EFM
EFM COMPARATOR

As this comparator is a current SW type, each of the H and L levels does not equal the power supply voltage, requiring feedback through a CMOS buffer.

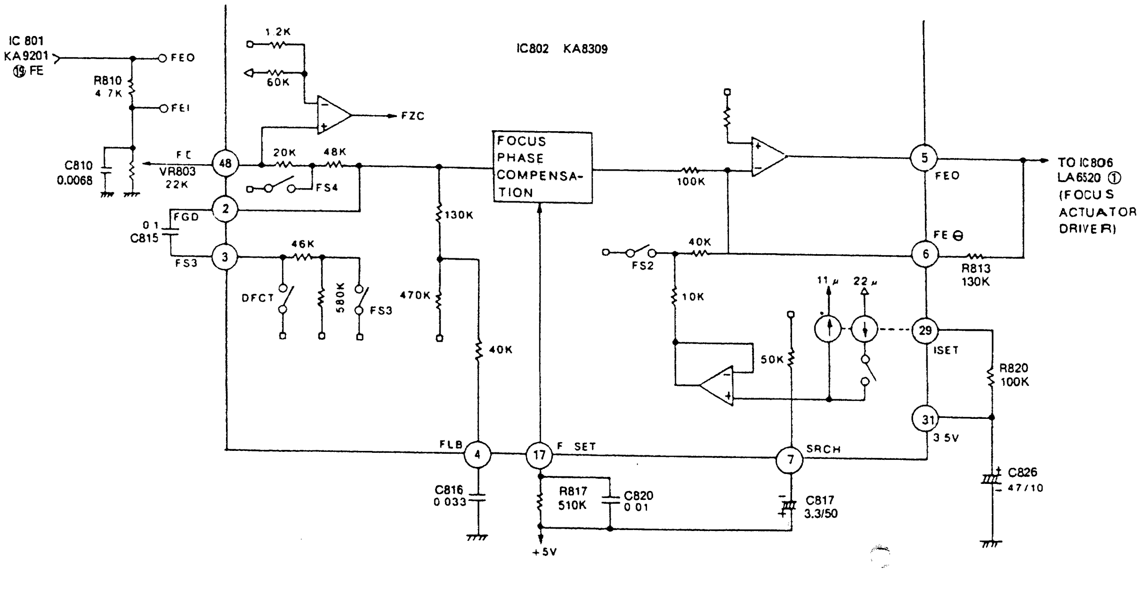
R807, R808, C809 and C810 form a LPF to obtain (V_{CC}+DGND)/2V. When fc (out-off frequency) is made more than 500Hz, the EFM low-frequency component leaks dably, degenerating the block error rate.

7. DEFECT CIRCUIT

The RFI signal bottom, after being inverted, is held with two time constants, one long and one short. The short time-constant bottom hold is done for a disc mirror defect more than 0.1m sec. The long time-constant bottom hold is done with the mirror level prior to the defect. By differentiating this with a capacitor coupling and shifting the level, both signals are compared to generate the mirror defect detection signal.


C804
0.033μ
IC801 KA9201
CC1
CC2
16
15
RFO
2
a
b
c
e
20
DEFECT
d
DEFECT AMP
24
C806
0.01μ
DEFECT
BOTTOM HOLD
DEFECT
COMPARATOR
a RFO
b DEFECT AMP
c BOTTOM HOLD(1) Solid line CC1
d BOTTOM HOLD(2) Dotted line CC2
e DEFECT
H
L
1.4μ sec MAX

8. FOCUS SERVO SYSTEM


IC 801
KA9201
19 FE
FEO
R810
4.7K
FEI
C810
0.0068
FE
VR803
22K
48
FGD
0.1
C815
2
FS3
3
1.2K
60K
FZC
20K
48K
FS4
46K
DFCT
580K
FS3
470K
130K
40K
IC802 KA8309
FOCUS
PHASE
COMPENSA-
TION
100K
40K
FS2
10K
50K
11μ
22μ
5
FEO
6
FE ⊖
R813
130K
29
ISET
R820
100K
31
3.5V
TO IC806
LA6520 ①
(FOCUS
ACTUATOR
DRIVER)
FLB
4
C816
0.033
17
F SET
R817
510K
C820
0.01
+5V
7
SRCH
C817
3.3/50
C826
47/10

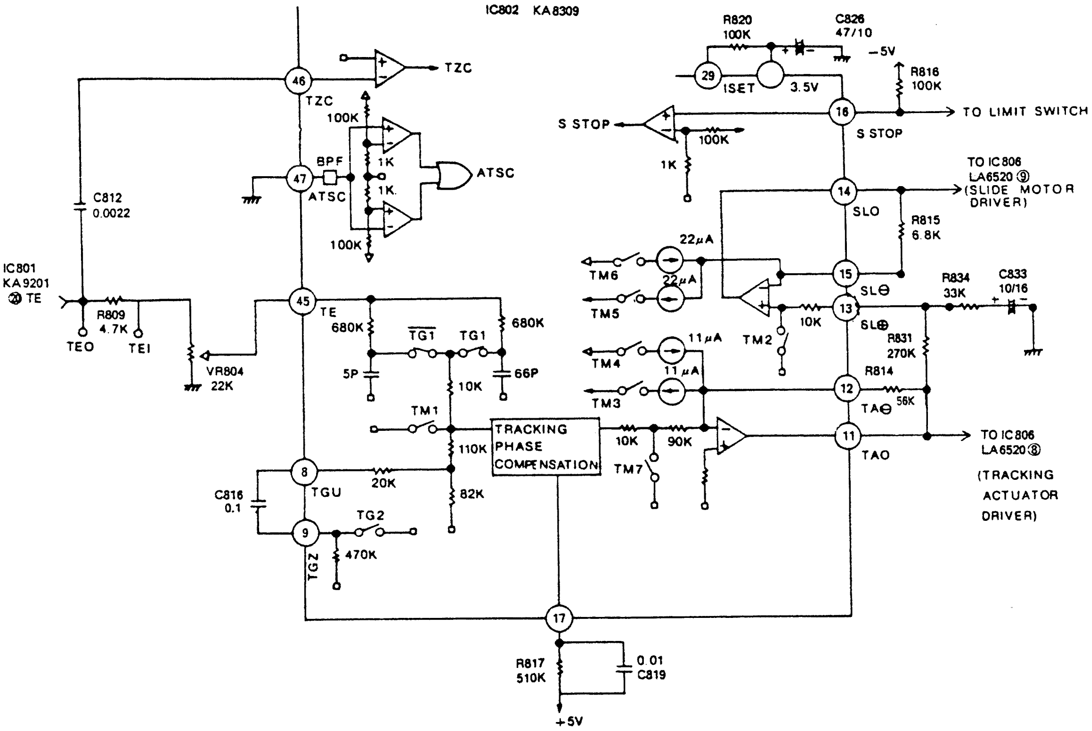
The above is a block diagram of the focus servo system. When FS3 is switched on, the high frequency gain can be reduced by forming a low frequency time constant through a capacitor connected across pins 2 and 3 and the internal resistor.

The capacitor across the pin 10 and GND has a time constant to raise the low frequency usually playback condition. The peak frequency of the focus phase compensation is inversely proportional to the resistor connected to pin 17 (about 1.2KHz when the resistor is 510KΩ).

The focus search peak becomes about ±1.1 V_{P-P} with the above constant. The peak is inversely proportional to the resistor connected across the pins 29 and 31. However, when this resistor is varied, the peaks of track jump and sled kick also vary.

The FZC comparator invert input is set to 2% of the difference between the reference voltage V_{CC} and VC (pin 1): $2\% \times (V_{CC}-VC)$.

9. TRACKING SERVO SYSTEM


IC802 KA8309
R820 100K
C826 47/10
-5V
29
ISET
3.5V
R816 100K
16
S STOP
S STOP
100K
1K
TO LIMIT SWITCH
TO IC806 LA6520 ⑨ (SLIDE MOTOR DRIVER)
14
SLO
R815 6.8K
46
TZC
TZC
100K
47
BPF
1K
1K
ATSC
ATSC
100K
C812 0.0022
IC801 KA9201 ⑳ TE
R809 4.7K
TEO
TEI
VR804 22K
45
TE
680K
680K
TG1
TG1
5P
66P
10K
TM1
22μA
TM6
22μA
TM5
15
SLΘ
13
10K
SL⊕
TM2
R834 33K
C833 10/16
R831 270K
11μA
TM4
11μA
TM3
R814
12
56K
TAΘ
TRACKING PHASE COMPENSATION
110K
10K
90K
TM7
11
TAO
TO IC806 LA6520⑧ (TRACKING ACTUATOR DRIVER)
8
TGU
20K
82K
C816 0.1
9
TG2
TG2
470K
17
R817 510K
0.01 C819
+5V

The above is a block diagram of the tracking sled servo system.

The capacitor across pins 8 and 9 has a time constant to lower the high frequency when TG2 is switched off. The tracking phase compensation peak frequency is inversely proportional to the resistor connected to pin 17 (about 1.2KHz when the resistor is 510KΩ).

For a tracking jump in the FWD or REV direction, TM3 or TM4 are set to ON. At this time, the peak voltage fed to the tracking coil is determined by the TM3 and TM4 current values and the feedback resistor from pin 12. That is:

Track jump peak voltage = TM3 (TM4) current value × feedback resistor value

The FWD or REV sled kick is done by setting TM5 or TM6 to ON. At this time, the peak voltage added to the sled motor is determined by the TM5 or TM6 current value and the feedback resistor from pin 15.

Sled jump peak voltage = TM5 (TM6) current value × feedback resistor value

Each SW current value is determined by the resistor connected to pins 29 and 31.

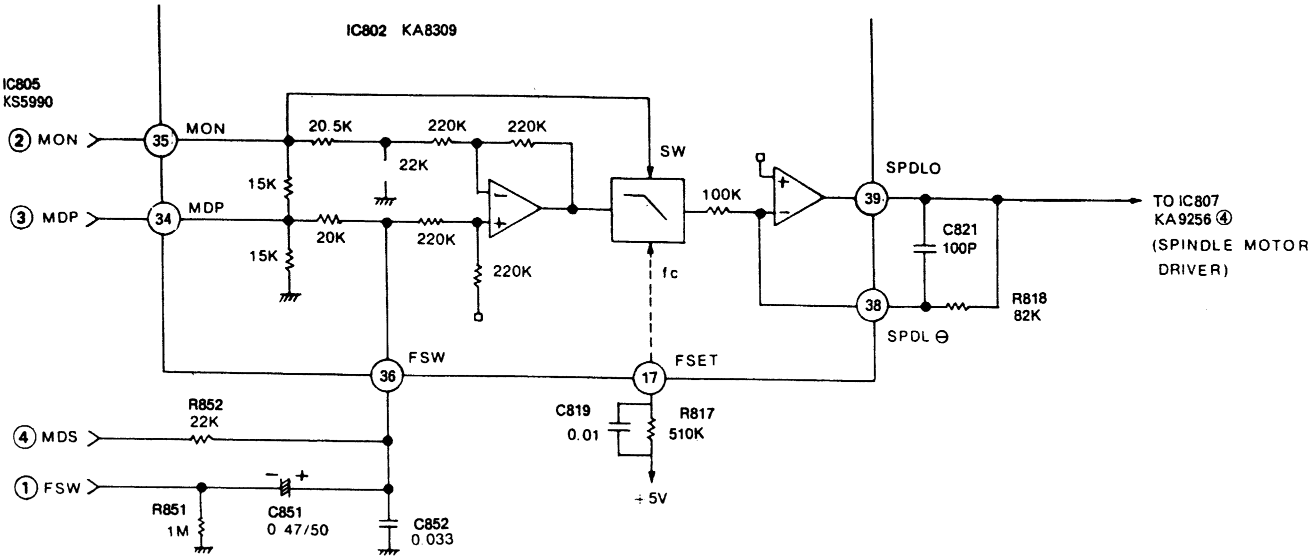
When the resistor is at about 120KΩ.

TM3 or TM4 is ±11μA and TM5 or TM6 is ±22μA.

This current value is almost inversely proportional to the resistor, variable within a range of about 5 to 40μA for TM3.

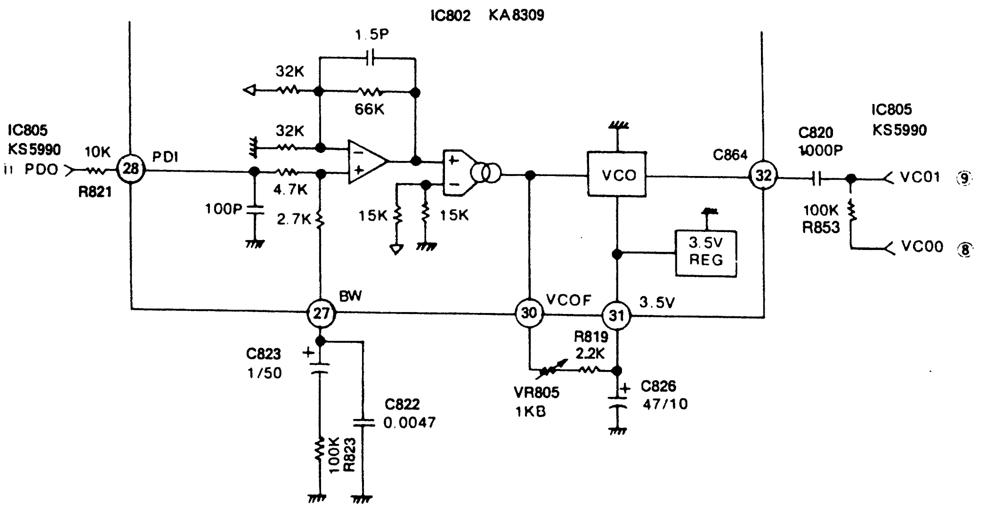
S STOP is the ON/OFF detection signal for the limit SW of the sled motor's innermost circumference.

10. SPINDLE SERVO AND LPF


IC802 KA8309
IC805
KS5990
② MON
③ MDP
④ MDS
① FSW
MON
MDP
35
34
36
17
39
38
20.5K
220K
220K
22K
15K
15K
20K
220K
220K
SW
fc
100K
SPDLO
SPDL ⊖
FSW
FSET
C821
100P
R818
82K
TO IC807
KA9256 ④
(SPINDLE MOTOR
DRIVER)
R852
22K
C819
0.01
R817
510K
+5V
R851
1M
C851
0 47/50
C852
0.033

The 200HZ LPF is formed with 0.033μF and 20KΩ connected to pin 36 and the secondary LPF is formed with the built-in LPF (fc up to 200Hz with 510KΩ for pin 17), and the carrier component of the CLV servo error signals MDS and MDP is eliminated.
In the CLV-S mode, FSW becomes L and the pin 36 LPF fc lowers, strengthening the filter further. With the pin 17 resistor connected to V_{cc}, fc does not vary with power supply voltage fluctuations.

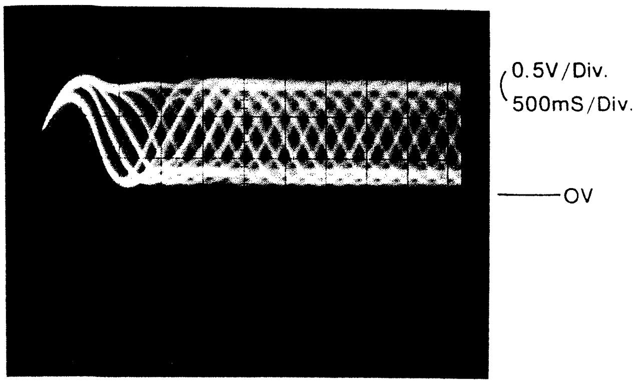
11. VCO LOOP FILTER & 8.64MHz VCO


IC802 KA8309
1.5P
32K
66K
32K
IC805
KS5990
11 PDO
10K
R821
28
PDI
100P
4.7K
2.7K
15K
15K
VCO
3.5V
REG
C864
32
IC805
KS5990
C820
1000P
VC01 ⑨
100K
R853
VC00 ⑧
BW
27
30
VCOF
31
3.5V
R819
2.2K
VR805
1KB
C826
47/10
C823
1/50
C822
0.0047
100K
R823

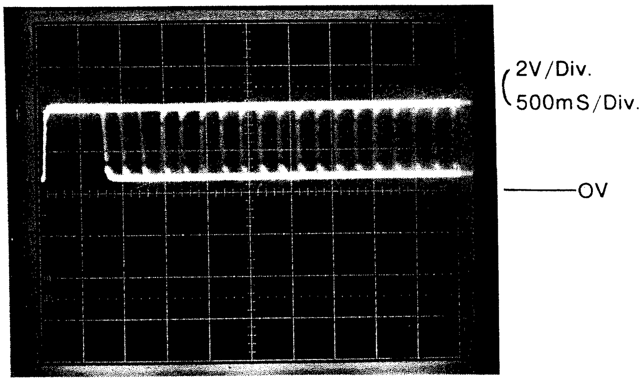
The phase compensation output PDD input from pin 38 has its PWM carrier component removed in the loop filter. Then, the V-I conversion is made and the free-running frequency setting current from pin 30 is added to control the VCO frequency. The VCO self-running frequency is almost inversely proportional to the resistor across pins 30 and 31. This resistor is set so that the PLL capture range center matches the 4.3218MHz at pin 70 of the KS5990.

WAVEFORMS OF MAJOR CHECK POINT

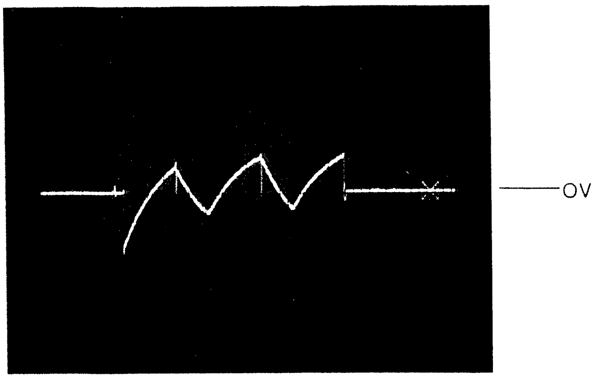
1. HF signal (RF signal) waveform (test point TP801) during normal play



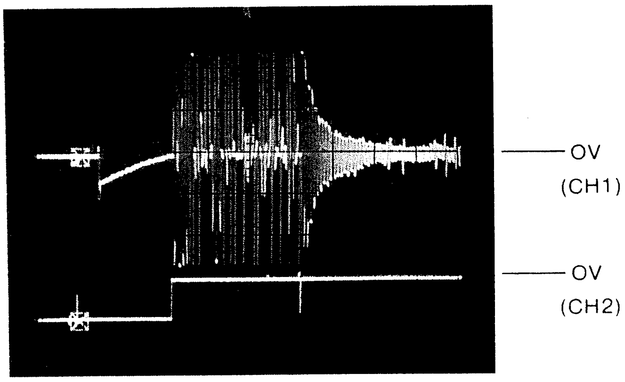
2. EFM signal (pin NO. ㉗ of IC801 waveform during normal play



3. Focus coil dirve waveform (pin NO. ③ of IC806)
   - When focus search failed or there is no disc on the tray



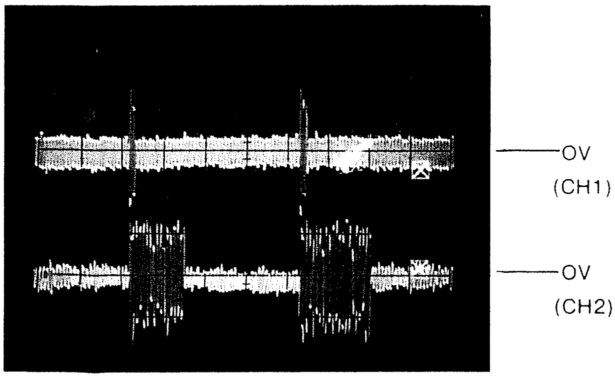
- Focus coil drive waveform (pin NO. ③ of IC806) and FOK (pin NO. ㉘ of IC801) when focus search is accomplished



CH1: FOCUS COIL DRIVE SIGNAL
2V/Div.
CH2: FOK

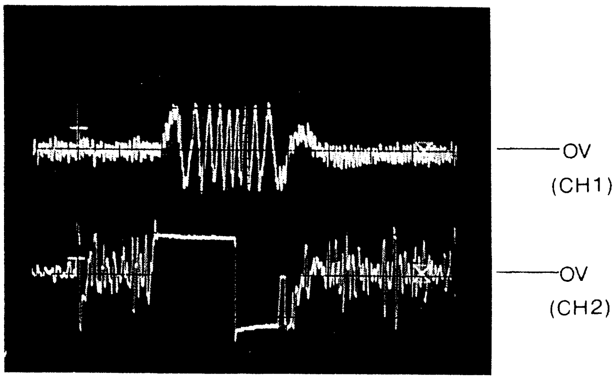
4. Tracking coil drive waveform (pin NO ⑥ of IC806) and TEO during track traverse

(1) When time division is 20mS/div.



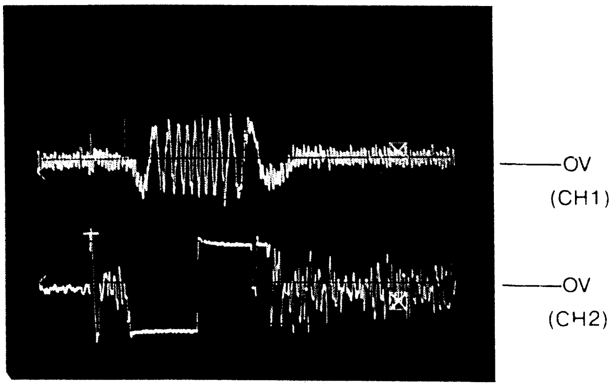
CH1: TEO
1V/div.
CH2: TRACKING COIL DRIVE SIGNAL
2V/div.

(2) When time division is 0.5mS/div.
(During forward track traverse)



CH1: TEO
1V/div.
CH2: TRACKING COIL DRIVE SIGNAL
2V/div.

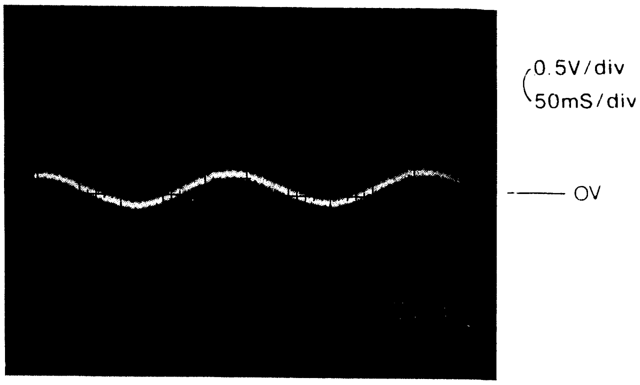
(3) When time division is 0.5mS/div. (During backward track traverse)



CH1: TEO
1V/div.

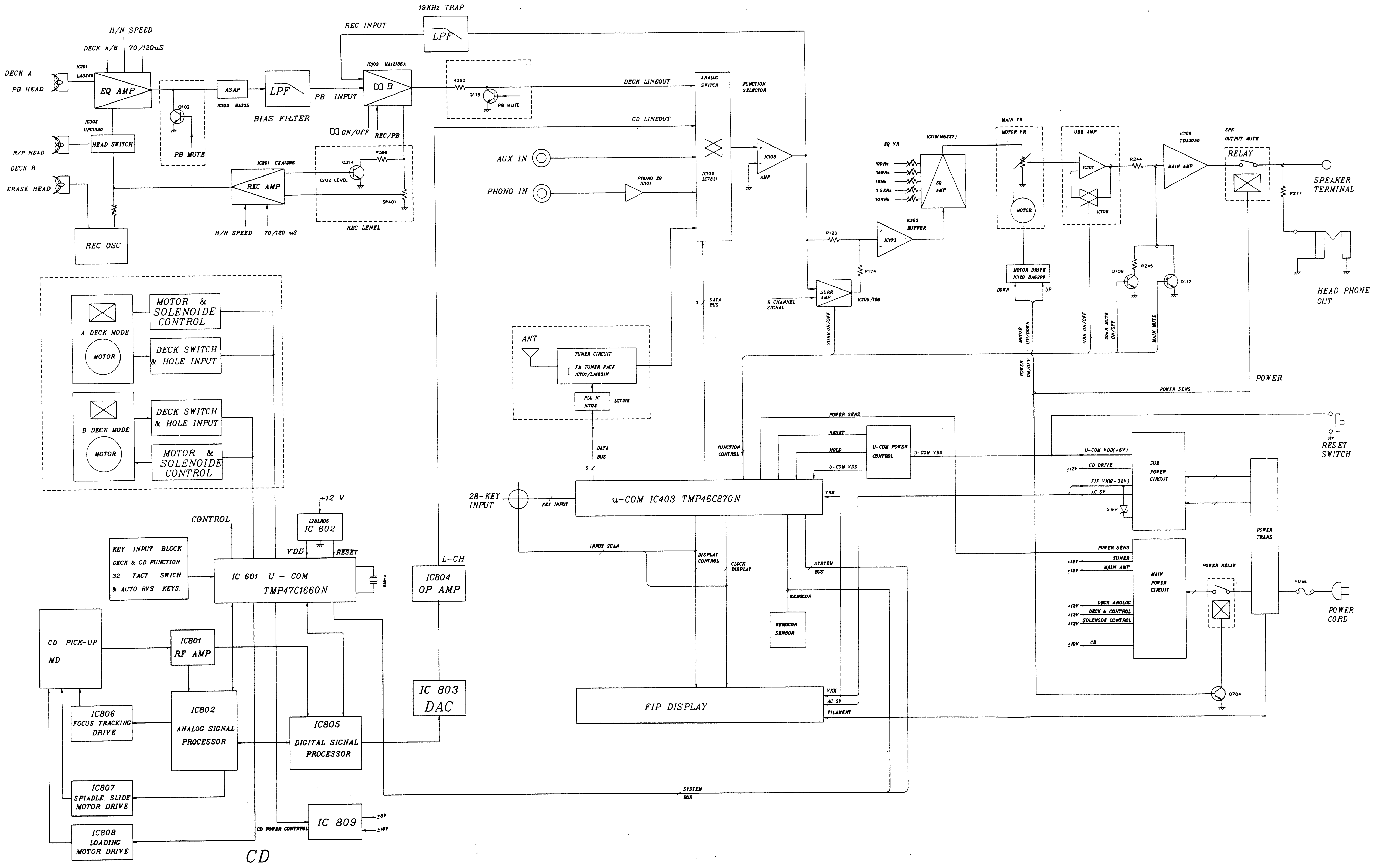
CH2: TRACKING COIL DRIVE SIGNAL
2V/div.

5. Feed motor drive waveform (pin NO. ⑪ of IC806) During normal play

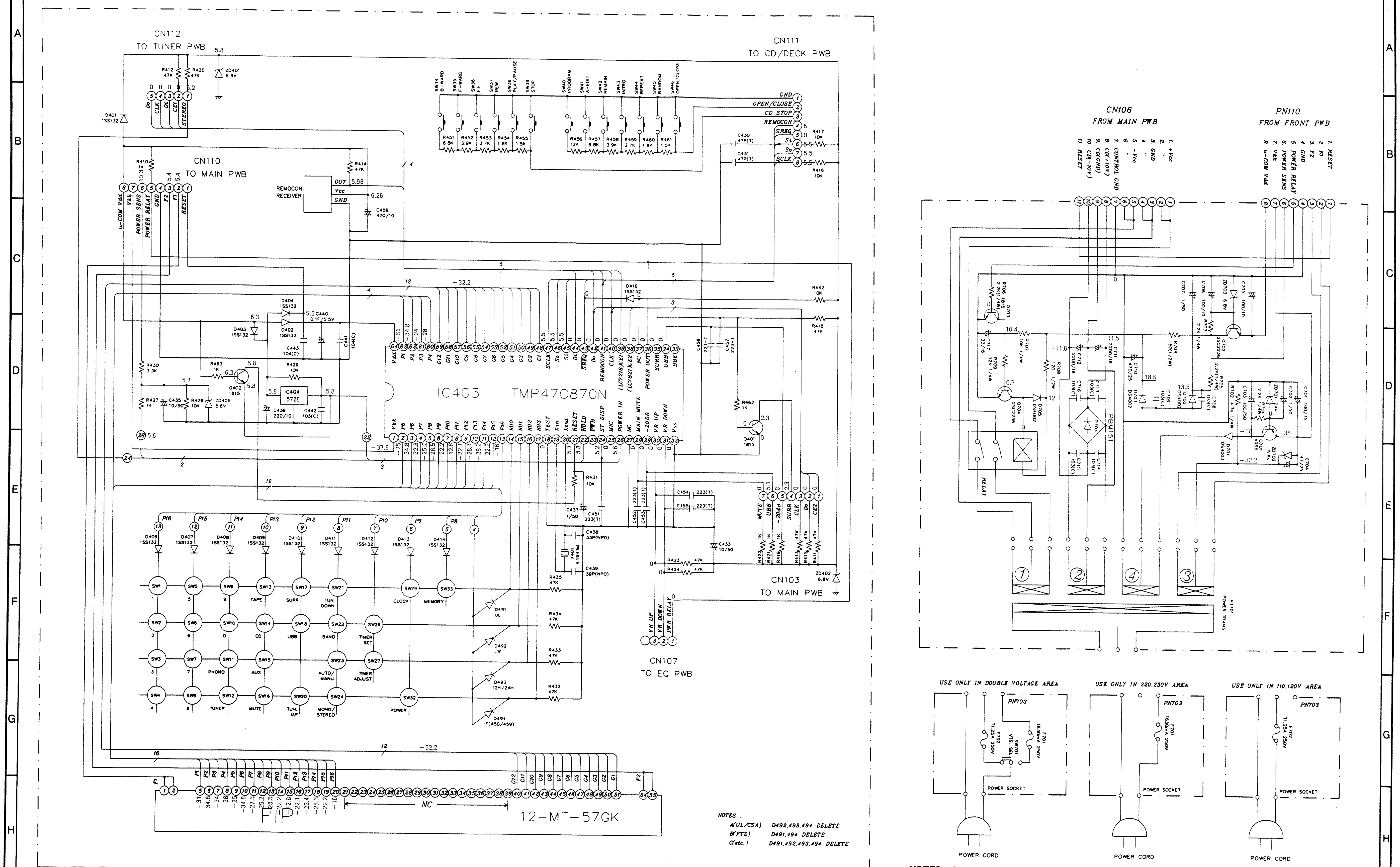


BLOCK DIAGRAM

R - CHANNEL SAME AS L - CHANNEL

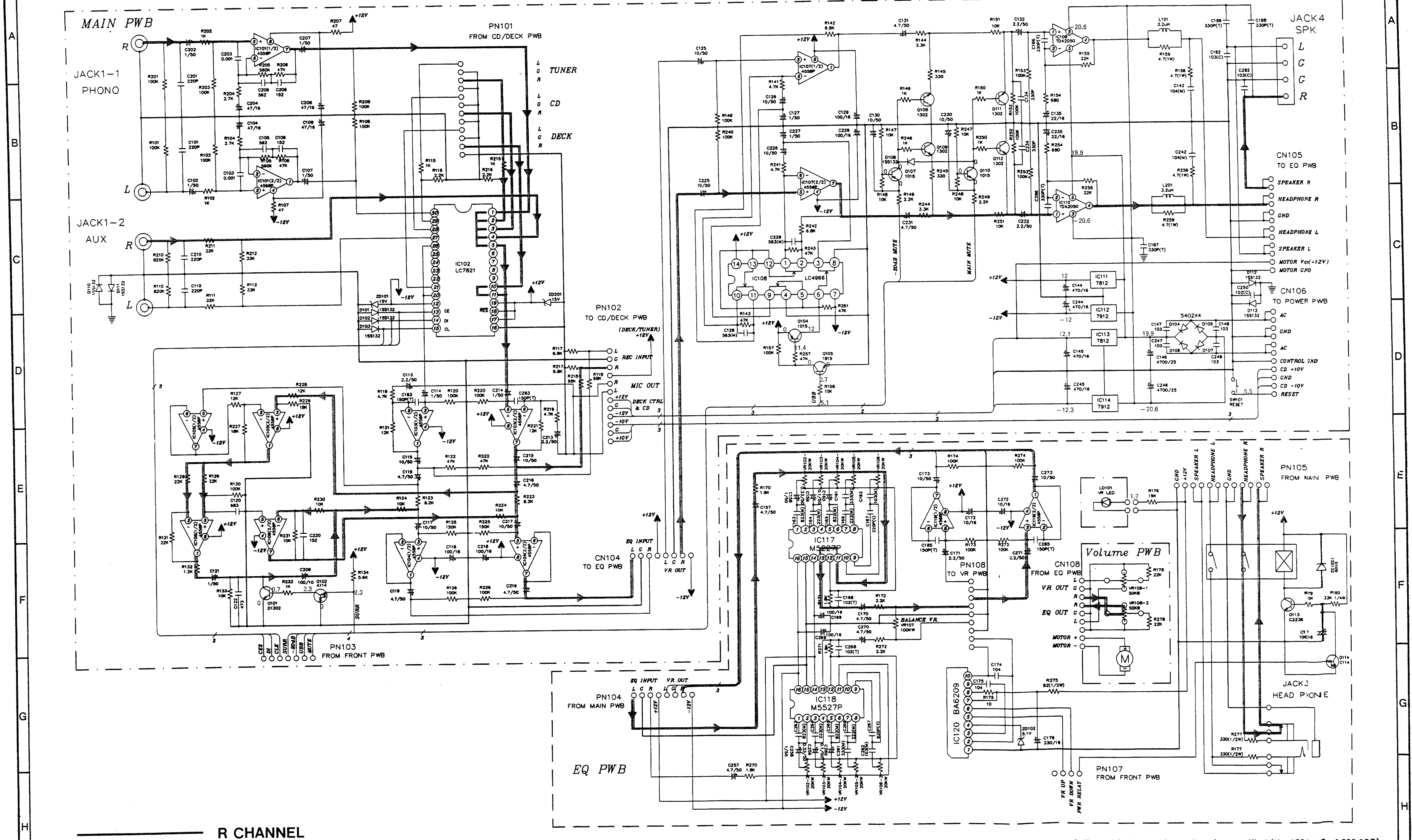

H/N SPEED
DECK A/B
70/120uS
DECK A
PB HEAD
IC101
LA3246
EQ AMP
IC303
UPC1330
HEAD SWITCH
R/P HEAD
DECK B
ERASE HEAD
REC OSC
Q102
PB MUTE
ASAP
IC102 BA335
LPF
BIAS FILTER
PB INPUT
REC INPUT
19KHz TRAP
LPF
IC103 HA12136A
B
ON/OFF
REC/PB
IC301 CXA1298
REC AMP
H/N SPEED
70/120 uS
Q314
R398
CrO2 LEVEL
SR401
REC LENEL
R262
Q115
PB MUTE
DECK LINEOUT
CD LINEOUT
AUX IN
PHONO IN
PHONO EQ
IC101
ANALOG SWITCH
IC102
LC7821
FUNCTION SELECTOR
IC103
AMP
3 DATA BUS
R123
R124
IC103
BUFFER
R CHANNEL SIGNAL
SURR AMP
IC105/106
SURR ON/OFF
EQ VR
100Hz
350Hz
1KHz
3.5KHz
10KHz
IC118(M5227)
EQ AMP
MAIN VR
MOTOR VR
MOTOR
MOTOR DRIVE
IC120 BA6209
DOWN
UP
MOTOR UP/DOWN
POWER ON/OFF
UBB AMP
IC107
IC108
UBB ON/OFF
-20dB MUTE ON/OFF
R244
IC109
TDA2050
MAIN AMP
R245
Q109
Q112
MAIN MUTE
SPK
OUTPUT MUTE
RELAY
R277
SPEAKER TERMINAL
HEAD PHONE OUT
POWER
POWER SENS
A DECK MODE
MOTOR
MOTOR & SOLENOIDE CONTROL
DECK SWITCH & HOLE INPUT
B DECK MODE
MOTOR
DECK SWITCH & HOLE INPUT
MOTOR & SOLENOIDE CONTROL
ANT
TUNER CIRCUIT
FM TUNER PACK
IC701/LA1851N
PLL IC
IC702
LC7218
DATA BUS
5
28-KEY INPUT
KEY INPUT
u-COM IC403 TMP46C870N
POWER SENS
RESET
HOLD
U-COM VDD
U-COM POWER CONTROL
U-COM VDD
FUNCTION CONTROL
VKK
INPUT SCAN
DISPLAY CONTROL
CLOCK DISPLAY
SYSTEM BUS
REMOCON
REMOCON SENSOR
FIP DISPLAY
VKK
AC 5V
FILAMENT
RESET SWITCH
U-COM VDD(+5V)
±12V
CD DRIVE
FIP VKK(-32V)
AC 5V
5.6V
SUB POWER CIRCUIT
POWER SENS
+12V
TUNER
±12V
MAIN AMP
+12V
DECK ANOLOG
+12V
DECK & CONTROL
+12V
SOLENODE CONTROL
±10V
CD
MAIN POWER CIRCUIT
POWER RELAY
POWER TRANS
FUSE
POWER CORD
Q704
+12 V
L78LR05
IC 602
VDD
RESET
CONTROL
KEY INPUT BLOCK
DECK & CD FUNCTION
32 TACT SWICH
& AUTO RVS KEYS.
IC 601 U - COM
TMP47C1660N
6MHz
L-CH
IC804
OP AMP
CD PICK-UP
MD
IC801
RF AMP
IC802
ANALOG SIGNAL PROCESSOR
IC805
DICITAL SIGNAL PROCESSOR
IC 803
DAC
IC806
FOCUS TRACKING DRIVE
IC807
SPIADLE. SLIDE MOTOR DRIVE
IC808
LOADING MOTOR DRIVE
CD POWER CONTROL
IC 809
±5V
±10V
SYSTEM BUS
CD

●FRONT & POWER CIRCUIT


CN112
TO TUNER PWB
CN111
TO CD/DECK PWB
CN110
TO MAIN PWB
REMOCON RECEIVER
IC403
TMP47C870N
IC404
572E
CN103
TO MAIN PWB
CN107
TO EQ PWB
12-MT-57GK
FIP
NC
CN106
FROM MAIN PWB
PN110
FROM FRONT PWB
RELAY
PBM151
PT701
POWER TRANS
USE ONLY IN DOUBLE VOLTAGE AREA
USE ONLY IN 220,230V AREA
USE ONLY IN 110,120V AREA
PN703
F701
F702
SW701
VTG SEL
POWER SOCKET
POWER CORD
SW1
SW2
SW3
SW4
SW5
SW6
SW7
SW8
SW9
SW10
SW11
SW12
SW13
SW14
SW15
SW16
SW17
SW18
SW20
SW21
SW22
SW23
SW24
SW26
SW27
SW29
SW32
SW33
TAPE
SURR
TUN DOWN
CLOCK
MEMORY
CD
UBB
BAND
TIMER SET
PHONO
AUX
AUTO/MANU
TIMER ADJUST
TUNER
MUTE
TUN UP
MONO/STEREO
POWER
SW34 B-WARD
SW35 F-WARD
SW36 FF
SW37 REW
SW38 PLAY/PAUSE
SW39 STOP
SW40 PROGRAM
SW41 A-EDIT
SW42 REMAIN
SW43 INTRO
SW44 REPEAT
SW45 RANDOM
SW46 OPEN/CLOSE
D491 UL
D492 LW
D493 12H/24H
D494 IF(450/459)
NOTES :
A(UL/CSA) D492,493,494 DELETE
B(FTZ) D491,494 DELETE
C(etc.) D491,492,493,494 DELETE

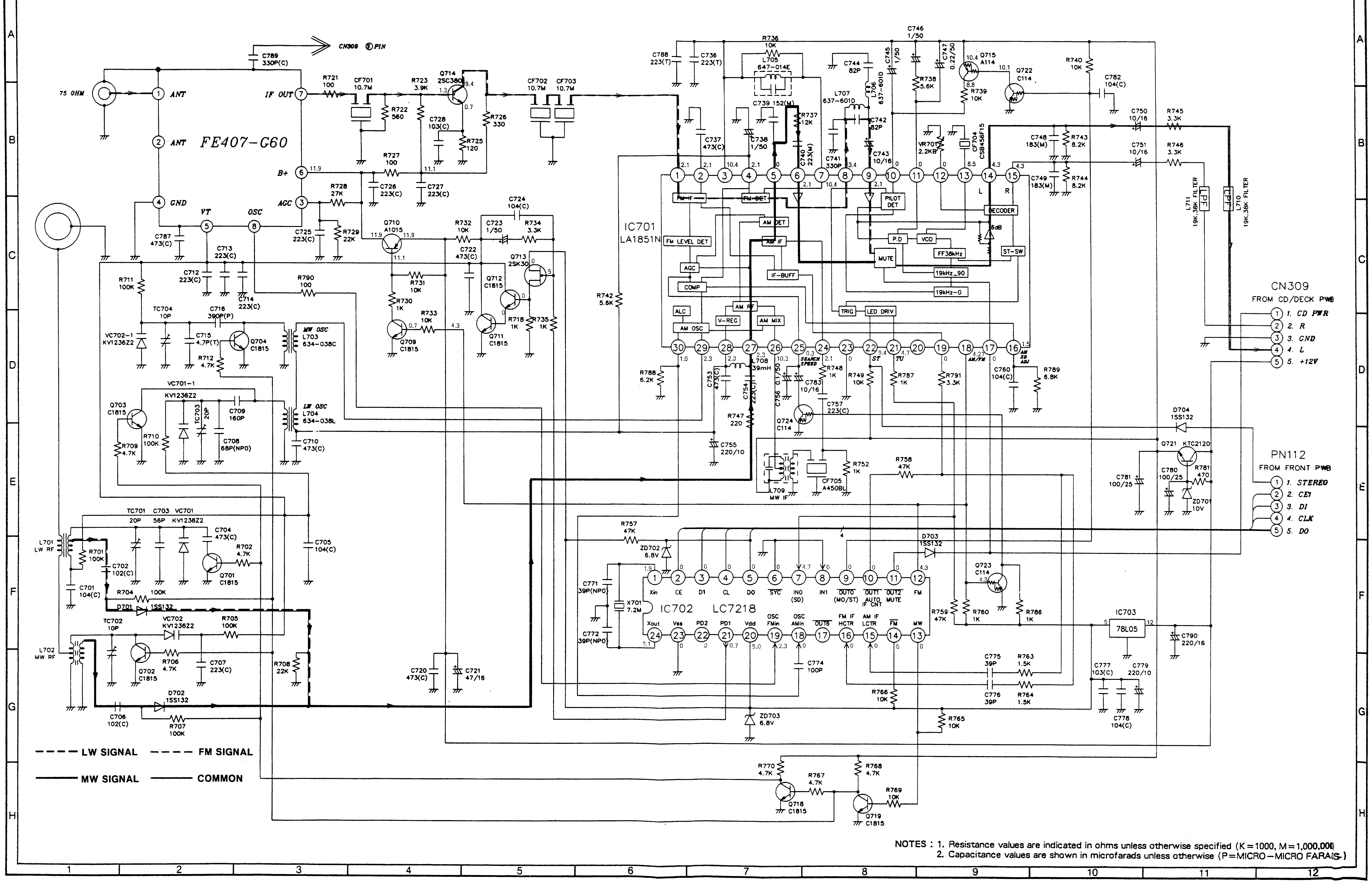
NOTES : 1. Resistance values are indicated in ohms unless otherwise specified (K=1000, M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise (P=MICRO−MICRO FARADS)

● AMP CIRCUIT


MAIN PWB
JACK1-1
PHONO
JACK1-2
AUX
R
L
IC101(1/2) 4558P
IC101(2/2) 4558P
PN101
FROM CD/DECK PWB
TUNER
CD
DECK
IC102
LC7821
PN102
TO CD/DECK PWB
(DECK/TUNER)
REC INPUT
MIC OUT
DECK CTRL & CD
+12V
-12V
+10V
-10V
IC103(1/2) 4558P
IC103(2/2) 4558P
IC104(1/2) 4558P
IC104(2/2) 4558P
IC105(1/2) 4558P
IC105(2/2) 4558P
IC106(1/2) 4558P
IC106(2/2) 4558P
CN104
TO EQ PWB
EQ INPUT
VR OUT
PN103
FROM FRONT PWB
CE
DI
CLK
SURR
-20dB
UBB
MUTE
IC107(1/2) 4558P
IC107(2/2) 4558P
IC108
LC4966
-20dB MUTE
MAIN MUTE
IC109 TDA2050
IC110 TDA2050
JACK4
SPK
CN105
TO EQ PWB
SPEAKER R
HEADPHONE R
GND
HEADPHONE L
SPEAKER L
MOTOR Vcc(+12V)
MOTOR GND
CN106
TO POWER PWB
AC
CONTROL GND
CD +10V
CD -10V
RESET
SW101 RESET
IC111 7812
IC112 7912
IC113 7812
IC114 7912
5402X4
IC117
M5527P
IC118
M5527P
IC119(1/2) 4558P
IC119(2/2) 4558P
BALANCE VR.
PN108
TO VR PWB
CN108
FROM EQ PWB
Volume PWB
MOTOR +
MOTOR -
LD101 VR LED
PN105
FROM MAIN PWB
PN104
FROM MAIN PWB
EQ PWB
IC120 BA6209
PN107
FROM FRONT PWB
VR UP
VR DOWN
PWR RELAY
JACKJ
HEAD PHONE
R CHANNEL

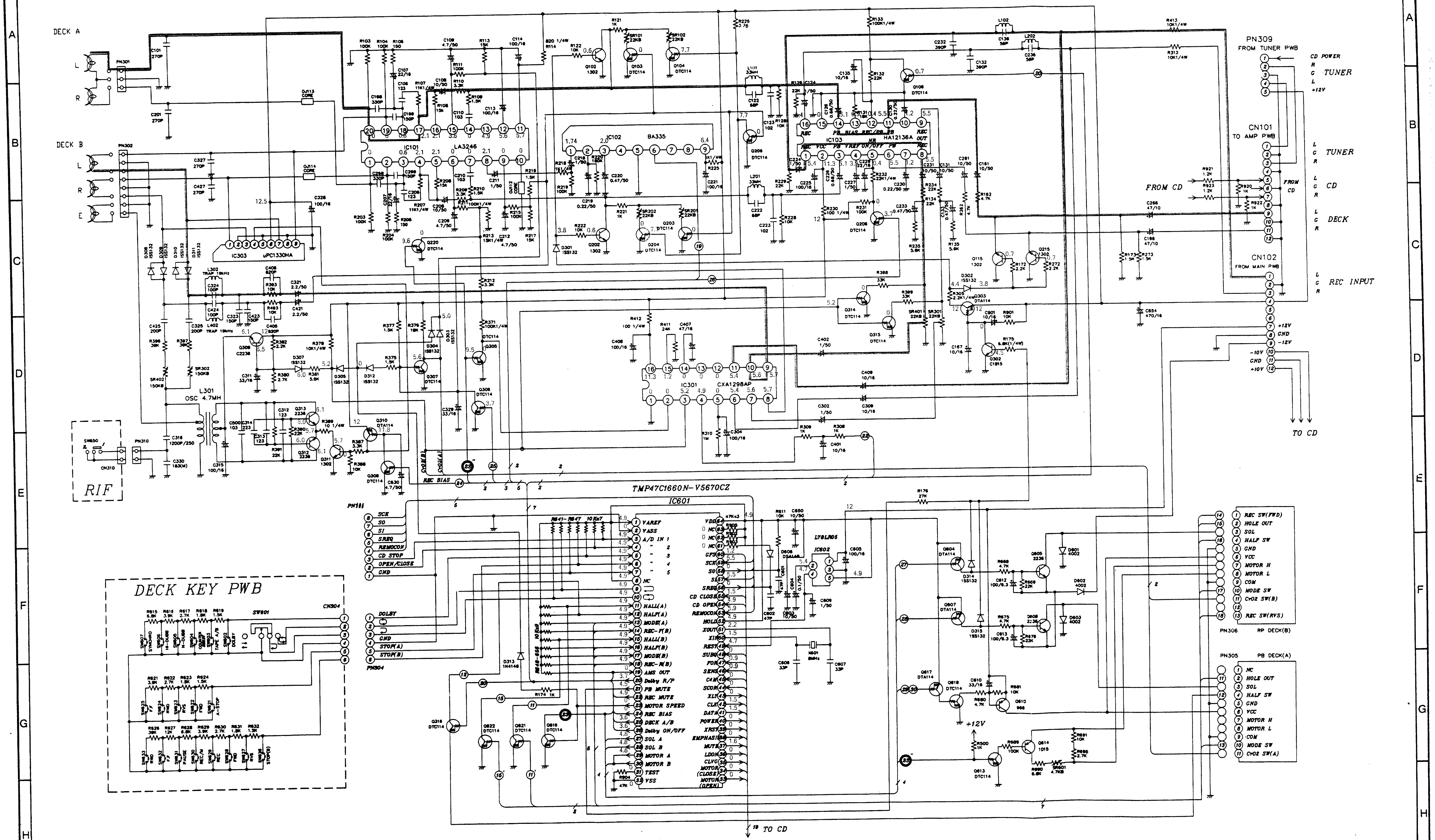
NOTES : 1. Resistance values are indicated in ohms unless otherwise specified (K=1000, M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise (P=MICRO-MICRO FARADS)

● TUNER CIRCUIT


1 2 3 4 5 6 7 8 9 10 11 12
A B C D E F G H
75 OHM
ANT
FE407-G60
GND
VT
OSC
AGC
B+
IF OUT
CN309 ⑤PIN
C789 330P(C)
R721 100
CF701 10.7M
R722 560
R723 3.9K
Q714 2SC380
R726 330
C728 103(C)
R725 120
R727 100
C726 223(C)
C727 223(C)
R728 27K
R729 22K
C725 223(C)
C787 473(C)
C713 223(C)
C712 223(C)
C714 223(C)
R711 100K
R790 100
CF702 10.7M
CF703 10.7M
C724 104(C)
C723 1/50
R734 3.3K
R732 10K
C722 473(C)
Q710 A1015
R731 10K
R730 1K
Q713 2SK30
Q712 C1815
Q711 C1815
R718 1K
R735 1K
R733 10K
Q709 C1815
TC704 10P
C716 390P(P)
VC702-1 KV1236Z2
C715 4.7P(T)
Q704 C1815
R712 4.7K
MW OSC L703 634-038C
VC701-1 KV1236Z2
Q703 C1815
TC703 20P
C709 160P
LW OSC L704 634-038L
R709 4.7K
R710 100K
C708 68P(NPO)
C710 473(C)
TC701 20P
C703 56P
VC701 KV1236Z2
C704 473(C)
C705 104(C)
L701 LW RF
R701 100K
C702 102(C)
R702 4.7K
Q701 C1815
C701 104(C)
R704 100K
D701 1SS132
TC702 10P
VC702 KV1236Z2
R705 100K
L702 MW RF
Q702 C1815
R706 4.7K
C707 223(C)
R708 22K
C720 473(C)
C721 47/16
C706 102(C)
D702 1SS132
R707 100K
LW SIGNAL
FM SIGNAL
MW SIGNAL
COMMON
C788 223(T)
C736 223(T)
R736 10K
L705 647-014E
C739 152(M)
C737 473(C)
C738 1/50
R737 12K
C740 223(M)
C744 82P
L707 637-601D
L706 637-601D
C741 330P
C742 82P
C743 10/16
C745 1/50
C746 1/50
C747 0.22/50
R738 5.6K
Q715 A114
R739 10K
Q722 C114
R740 10K
C782 104(C)
VR701 2.2KB
CF704 CSB456F15
C748 183(M)
R743 8.2K
C749 183(M)
R744 8.2K
C750 10/16
R745 3.3K
C751 10/16
R746 3.3K
L711 19K.38K FILTER
L710 19K.38K FILTER
LPF
IC701 LA1851N
FM IF
FM DET
AM DET
AM IF
FM LEVEL DET
AGC
COMP
ALC
AM OSC
V-REC
AM RF
AM MIX
IF-BUFF
PILOT DET
P.D
VCO
FF38kHz
MUTE
19kHz_90
19kHz-0
DECODER
6dB
ST-SW
TRIG
LED DRIV
SEARCH SPEED
ST
TU
AM/FM
SD ADJ
R742 5.6K
R788 6.2K
C753 473(C)
L708 39mH
C754 223(C)
C756 0.1/50
C783 10/16
R748 1K
R749 10K
R787 1K
R791 3.3K
C760 104(C)
R789 6.8K
C757 223(C)
Q724 C114
R747 220
C755 220/10
L709 MW IF
CF705 A450BL
R752 1K
R758 47K
CN309 FROM CD/DECK PWB
1. CD PWR
2. R
3. GND
4. L
5. +12V
D704 1SS132
Q721 KTC2120
C781 100/25
C780 100/25
R781 470
ZD701 10V
PN112 FROM FRONT PWB
1. STEREO
2. CE1
3. DI
4. CLK
5. DO
R757 47K
ZD702 6.8V
D703 1SS132
C771 39P(NPO)
X701 7.2M
C772 39P(NPO)
IC702 LC7218
Xin CE D1 CL DO SYC INO (SD) IN1 OUTO (MO/ST) OUT1 AUTO IF CNT OUT2 MUTE FM
Xout Vss PD2 PD1 Vdd OSC FMin OSC AMin OUT6 FM IF HCTR AM IF LCTR FM MW
Q723 C114
R759 47K
R760 1K
R786 1K
IC703 78L05
C790 220/16
C774 100P
ZD703 6.8V
C775 39P
R763 1.5K
C776 39P
R764 1.5K
R766 10K
R765 10K
C777 103(C)
C779 220/10
C778 104(C)
R770 4.7K
R768 4.7K
R767 4.7K
R769 10K
Q718 C1815
Q719 C1815

NOTES : 1. Resistance values are indicated in ohms unless otherwise specified (K=1000, M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise (P=MICRO-MICRO FARADS)

● DECK CIRCUIT

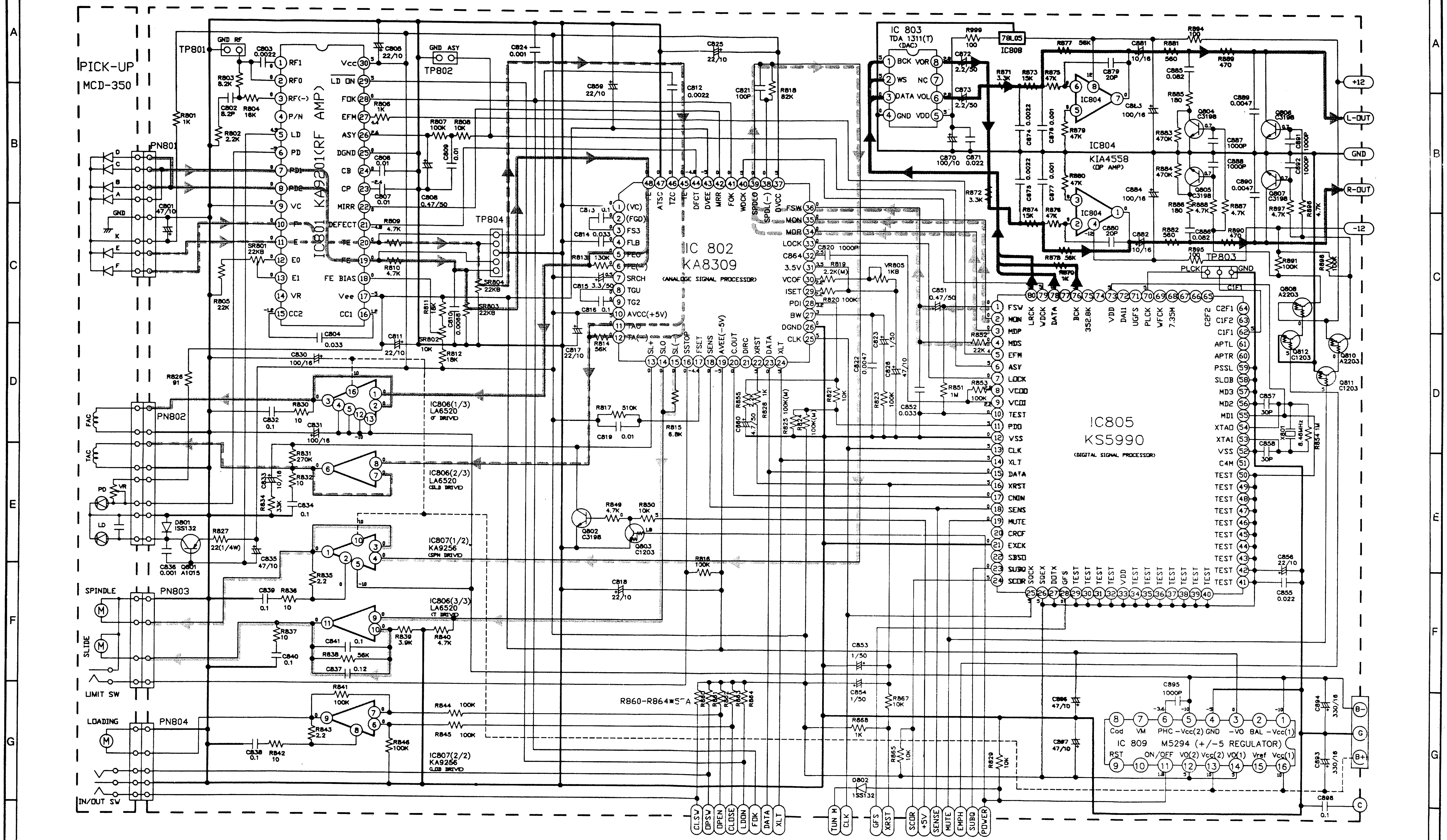

DECK A
PN301
DECK B
PN302
IC303 uPC1330HA
IC101 LA3246
IC102 BA335
IC103 HA12136A
IC301 CXA1298AP
IC601 TMP47C1660N-V5670CZ
IC602 L78LR05
L301 OSC 4.7MH
PN309 FROM TUNER PWB
CD POWER
TUNER
CN101 TO AMP PWB
FROM CD
CD
DECK
CN102 FROM MAIN PWB
REC INPUT
+12V
GND
-12V
-10V
+10V
TO CD
RIF
SW650
PN310
CN310
PN111
SCK
SO
SI
SREQ
REMOCON
CD STOP
OPEN/CLOSE
GND
DECK KEY PWB
CN304
SW601
DOLBY
STOP(A)
STOP(B)
PN304
REC BIAS
VAREF
VASS
A/D IN 1
NC
HALL(A)
HALF(A)
MODE(A)
REC-P(B)
HALL(B)
HALF(B)
MODE(B)
REC-P(B)
AMS OUT
Dolby R/P
PB MUTE
REC MUTE
MOTOR SPEED
REC BIAS
DECK A/B
Dolby ON/OFF
SOL A
SOL B
MOTOR A
MOTOR B
TEST
VSS
VDD
CFS
SCK
SO
SI
SREQ
CD CLOSE
CD OPEN
REMOCON
HOLD
XOUT
XIN
RESET
X601 8MHz
REC SW(FWD)
HOLE OUT
SOL
HALF SW
GND
VCC
MOTOR H
MOTOR L
COM
MODE SW
CrO2 SW(B)
REC SW(RVS)
PN306 RP DECK(B)
PN305 PB DECK(A)
CrO2 SW(A)
TO CD

———— PLAY SIGNAL

———— RECORD SIGNAL

NOTES : 1. Resistance values are indicated in ohms unless otherwise specified (K=1000, M=1,000,000)
2. Capacitance values are shown in microfarads unless otherwise (P=MICRO−MICRO FARADS)

● CDP 회로

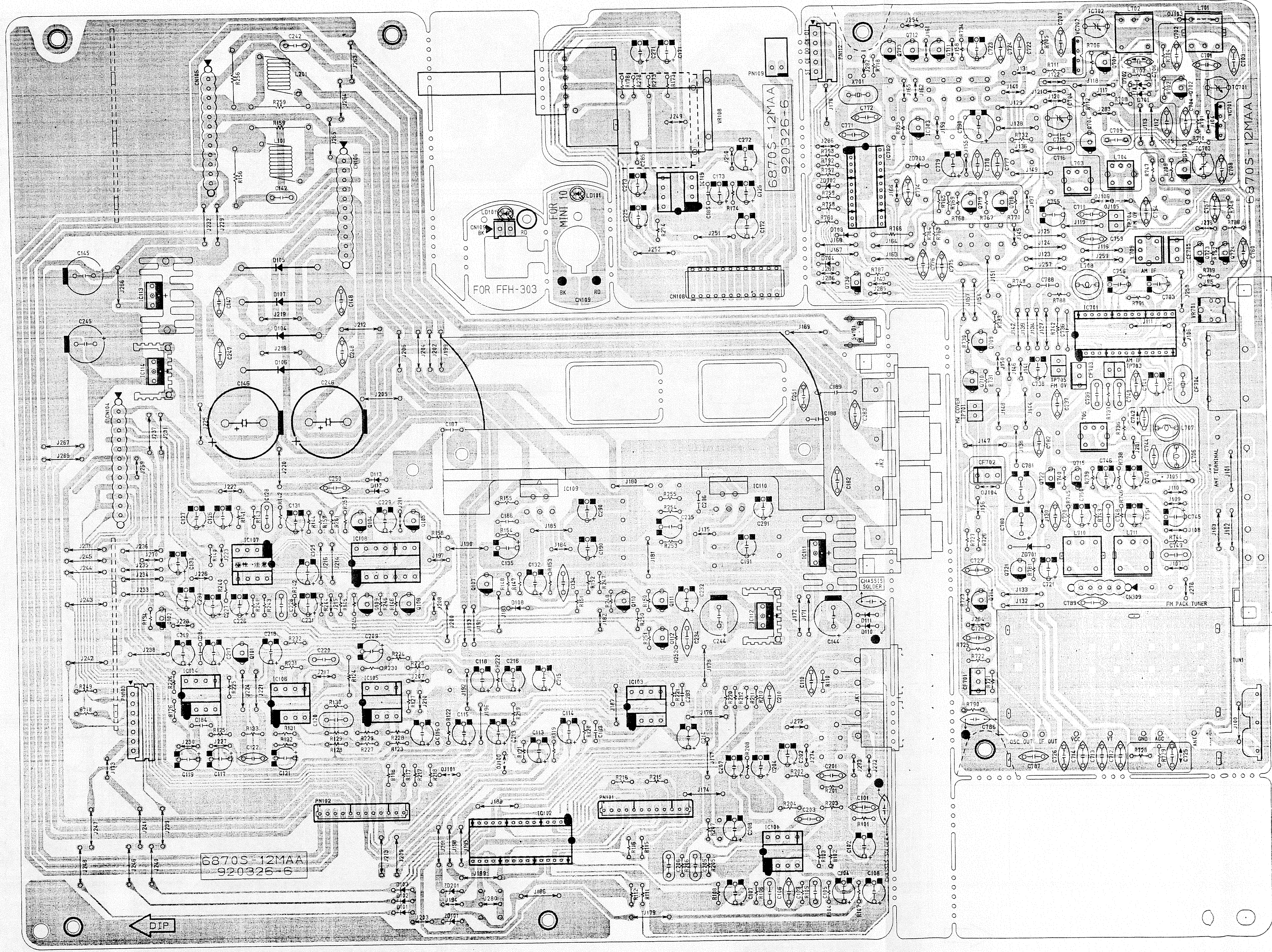

PICK-UP
MCD-350
TP801
GND RF
PN801
PN802
PN803
PN804
FAC
TAC
PD
LD
SPINDLE
SLIDE
LIMIT SW
LOADING
IN/OUT SW
IC801 KA9201(RF AMP)
RF1
RFO
RF(-)
P/N
PD
PD1
PD2
VC
DEFECT
TE
FE
FE BIAS
Vee
CC1
CC2
VR
E0
E1
Vcc
LD ON
FOK
EFM
ASY
DGND
CB
CP
MIRR
TP802
GND ASY
TP804
IC 802
KA8309
(ANALOGE SIGNAL PROCESSOR)
ATSC
TZC
DFCT
DVEE
MRR
FOK
WDCK
SPDLO
SPDL(-)
VCC
FSW
MON
MDP
LOCK
C864
3.5V
VCOF
ISET
PDI
BW
DGND
CLK
(VC)
(FGD)
FS3
FLB
FEO
FE(-)
SRCH
TGU
TG2
AVCC(+5V)
TAO
TA(-)
SL+
SLO
SL-
SSTOP
FSET
SENS
AVEE(-5V)
C.OUT
DIRC
XRST
DATA
XLT
IC806(1/3)
LA6520
(F DRIVE)
IC806(2/3)
LA6520
(SLD DRIVE)
IC807(1/2)
KA9256
(SPN DRIVE)
IC806(3/3)
LA6520
(T DRIVE)
IC807(2/2)
KA9256
(LOD DRIVE)
Q801 A1015
D801 1SS132
Q802 C3198
Q803 C1203
IC 803
TDA 1311(T)
(DAC)
BCK
WS
DATA
GND
VOR
NC
VOL
VDD
78L05
IC808
IC804
KIA4558
(OP AMP)
Q804 C3198
Q805 C3198
Q806 C3198
Q807 C3198
+12
L-OUT
GND
R-OUT
-12
TP803
PLCK
GND
IC805
KS5990
(DIGITAL SIGNAL PROCESSOR)
LRCK
VDCK
DATA
BCK
352.8K
VDD
DA11
UGFS
PLCK
WFCK
7.35M
C2F2
C2F1
C1F2
C1F1
APTL
APTR
PSSL
SLOB
MD3
MD2
MD1
XTAO
XTAI
VSS
C4M
TEST
XO1
8.4672MHz
FSW
MON
MDP
MDS
EFM
ASY
LOCK
VCDO
VCOI
TEST
PDO
VSS
CLK
XLT
DATA
XRST
CNIN
SENS
MUTE
CRCF
EXCK
SBSO
SUBQ
SCOR
SQCK
SQEX
DOTX
GFS
Q808 A2203
Q810 A2203
Q811 C1203
Q812 C1203
R860-R864*5~A
D802 1SS132
IC 809 M5294 (+/-5 REGULATOR)
Cod
VM
PHC
-Vcc(2)
GND
-VO
BAL
-Vcc(1)
RST
ON/OFF
VO(2)
Vcc(2)
VO(1)
Vref
Vcc(1)
B-
G
B+
C
CLSW
OPSW
OPEN
CLOSE
LDON
FOK
DATA
XLT
TUN M
CLK
GFS
XRST
SCOR
+5V
SENSE
MUTE
EMPH
SUBQ
POWER
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12

CD AUDIO SIGNAL
FOCUS SIGNAL
TRACKING SIGNAL
SLIDE MOTOR SIGNAL
SPINDLE MOTOR SIGNAL

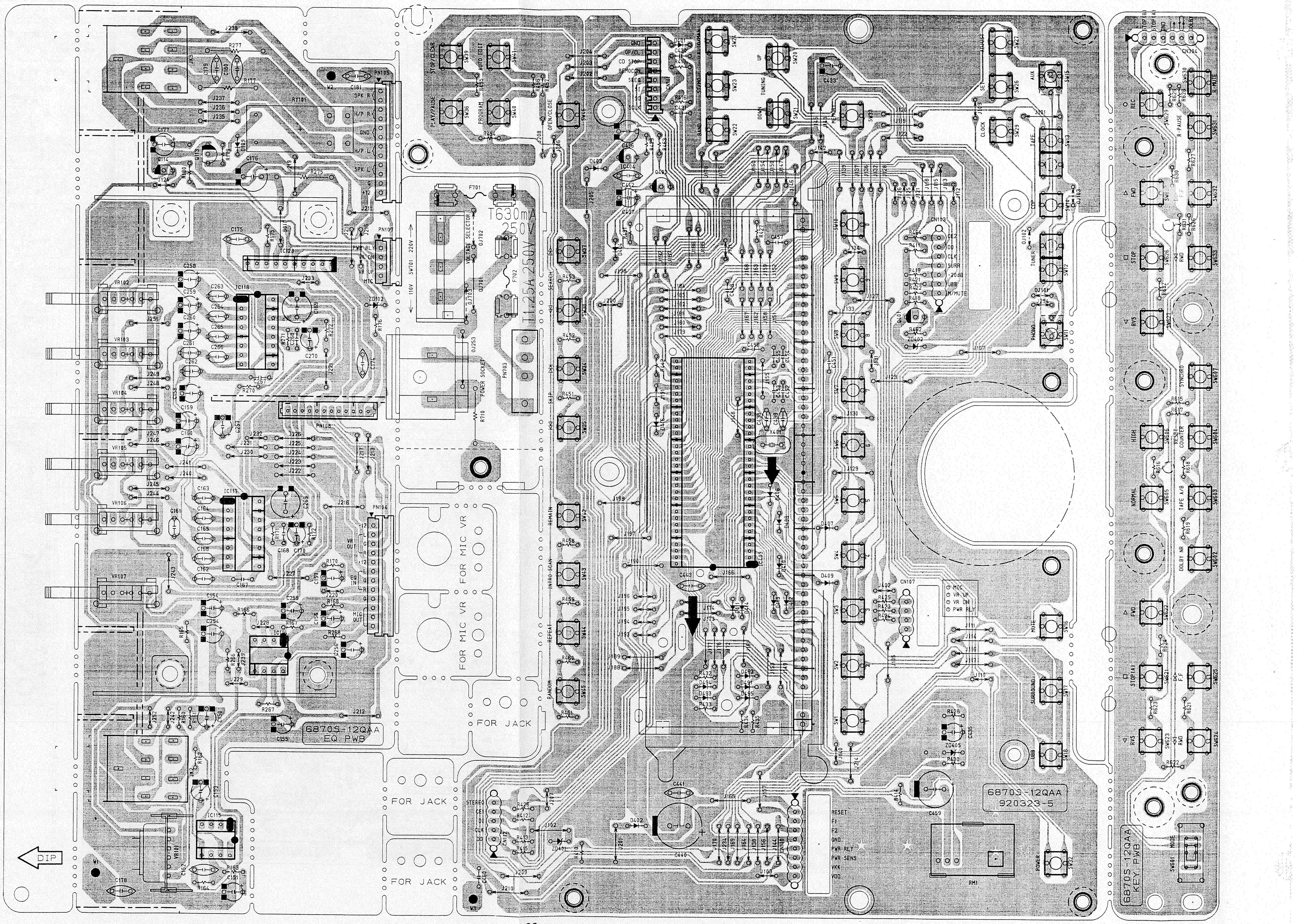
NOTE : 1. 저항의 단위는 Ω이며(K=1000, M=10⁶), 콘덴서의 단위는 μF(P=10⁻¹²)입니다.
2. 본 회로도는 성능개선을 위하여 변경될 수 있습니다.

PCB LAYOUT

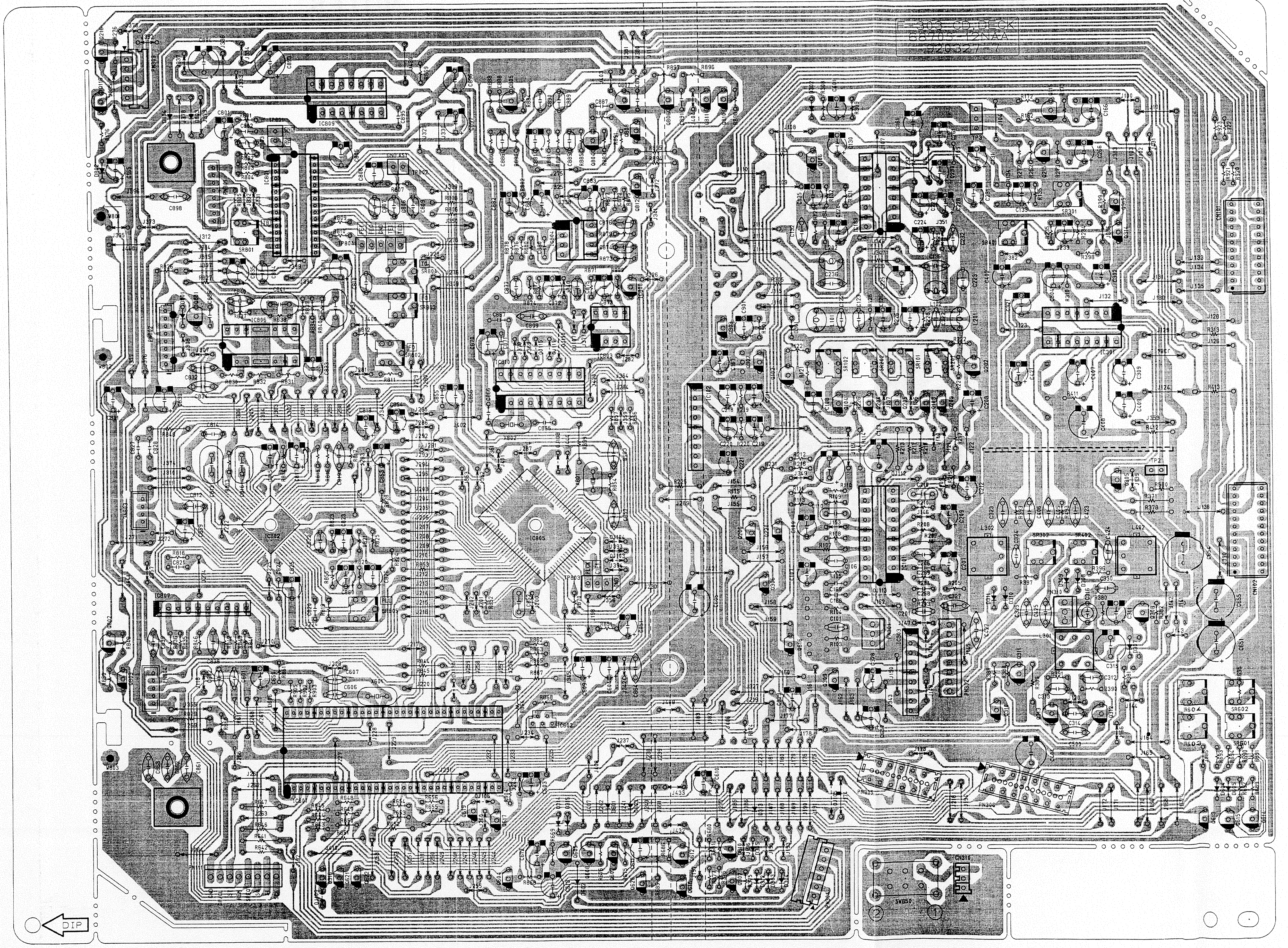
- **MAIN/TUNER/ VOLUME/LED P.C.BOARD**


6870S-12MAA
920326-6
FOR FFH-303
FOR MINI 10
DIP
CHASSIS SOLDER
ANT TERMINAL
FM PACK TUNER
TUN1
IC701
IC702
IC101
IC102
IC103
IC104
IC105
IC106
IC107
IC108
IC109
IC110
IC111
IC112
IC113
IC114
PN101
PN102
PN105
CN104
CN105
CN106
CN108
CN109
CN309
JK1
JK2
C145
C146
C245
C246
L101
L201
L701
L702

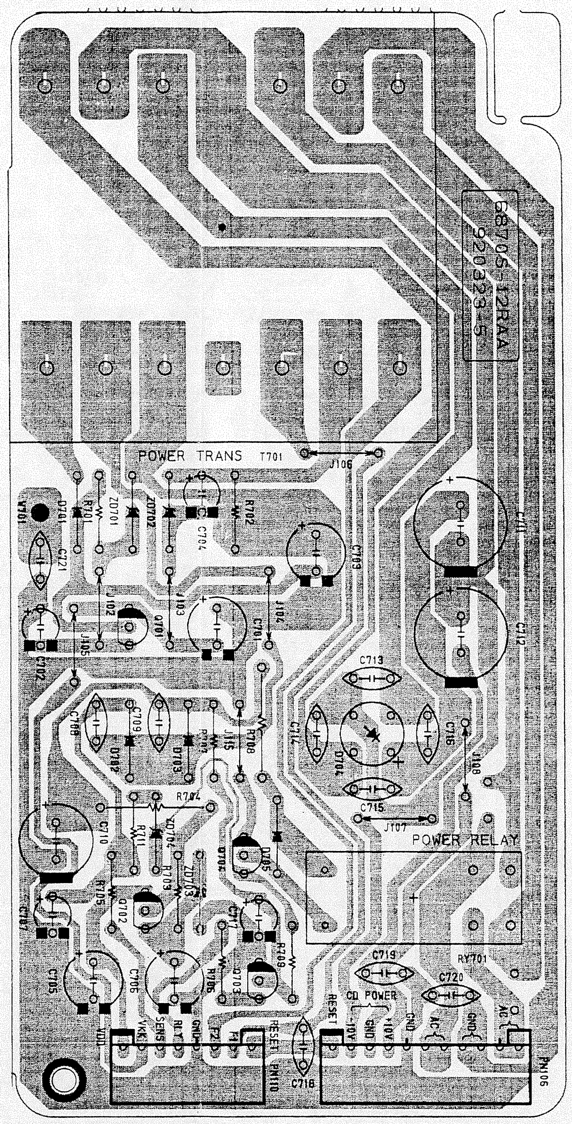
●FRONT/EQ P.C.BOARD


6870S-12QAA
EQ PWB
6870S-12QAA
920323-5
6870S-12QAA
KEY PWB
FOR MIC VR
FOR MIC VR
FOR JACK
FOR JACK
FOR JACK
DIP
T630mA 250V
T1.25A 250V
VOLTAGE SELECTOR
POWER SOCKET
110V SW701 220V
STOP/CLEAR
PLAY/PAUSE
AUTO EDIT
PROGRAM
OPEN/CLOSE
SEARCH
SKIP
REMAIN
INTRO-SCAN
REPEAT
RANDOM
UP
TUNING
DOWN
MEMORY
CLOCK
SET
TAPE
CDP
TUNER
PHONO
AUX
MUTE
SURROUND
UBB
POWER
REC
R-MUTE
R-PAUSE
FWD
STOP
RWD
RVS
SYNCHRO
HIGH
NORMAL
RESET COUNTER
TAPE A/B
DOLBY NR
STOP(A)
F.F
MODE
RM1
RESET
F1
F2
GND
PWR RLY
PWR SENS
VKK
VDD
MIC
VR UP
VR DN
PWR RLY
STEREO
CE1
DI
CLK
DO
CE2
SURR
-20dB
UBB
M/MUTE
SPK R
H/P R
GND
H/P L
SPK L
VR OUT
EQ IN
MIC OUT
GND
OP/CL
CD STOP
REMOCON
SKEG

● CD/DECK P.C.BOARD

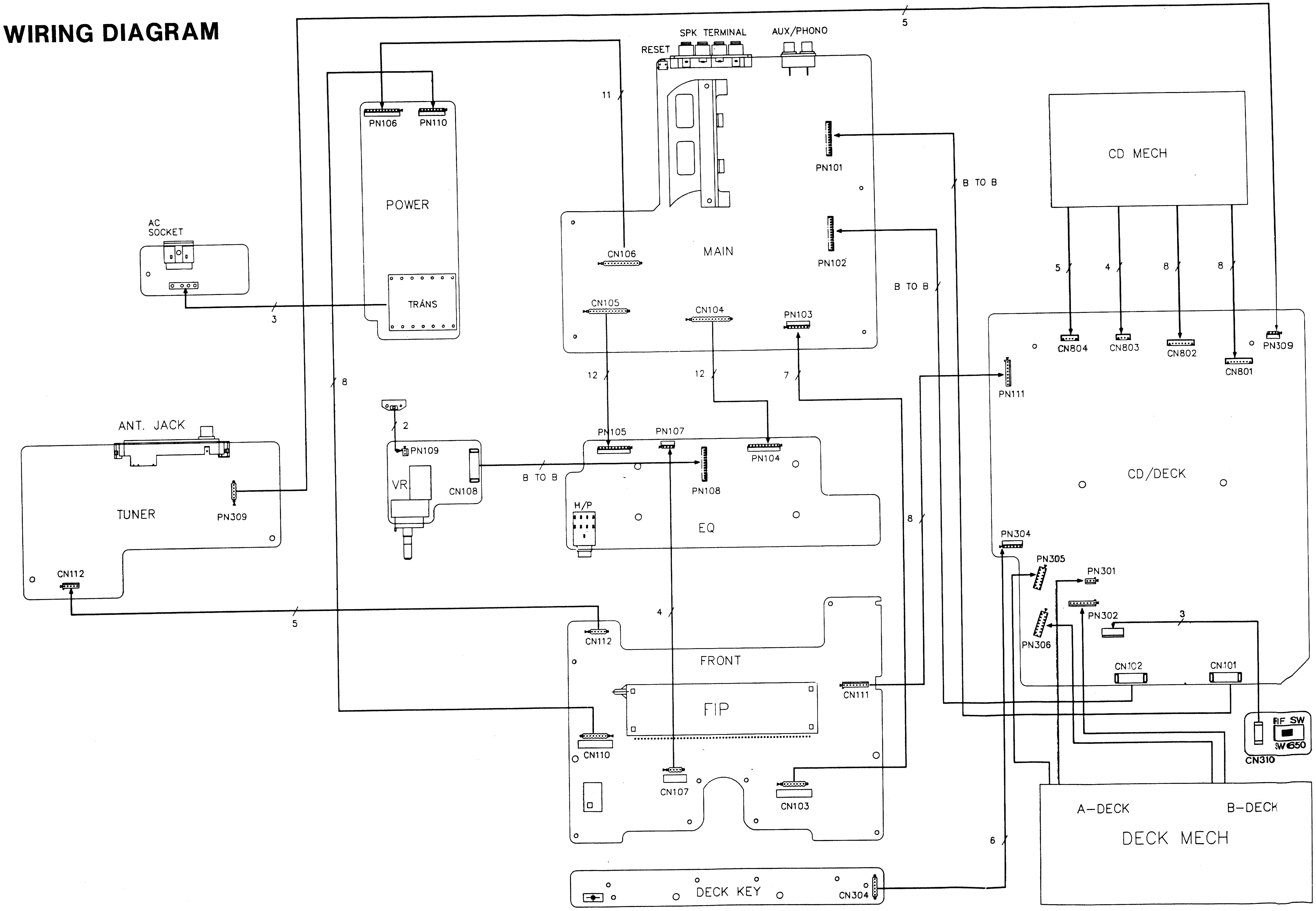

DIP
SW650
CN310
PN305
PN306
IC805
IC802
IC301

● POWER P.C.BOARD


6870S 12RAA
92032345
POWER TRANS
T701
J106
IO1A
D701
R701
ZD701
ZD702
C704
R702
C721
C703
C711
C712
J102
J103
J104
Q701
C701
C702
J105
C713
C708
C709
D702
D703
R707
J115
R708
C714
D704
C716
J108
C715
J107
R704
C710
R711
ZD704
R703
ZD703
Q704
D705
POWER RELAY
R705
Q702
C707
C717
R709
C705
C706
R706
Q703
C719
RY701
C720
CD POWER
VDD
VKK
SENS
RLY
GND
F2
F1
RESET
PN110
C718
RESET
-10V
GND
+10V
GND
AC
GND
AC
PN106

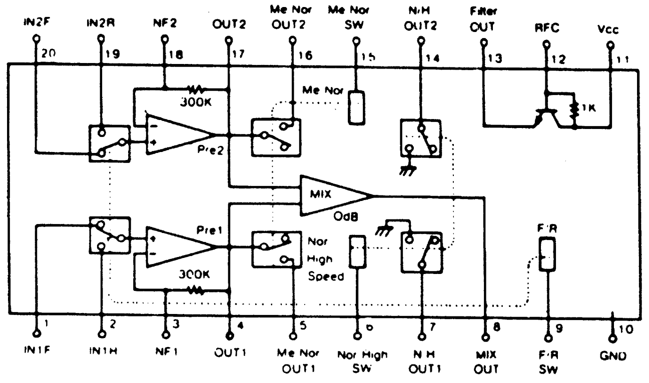
NOTES

WIRING DIAGRAM

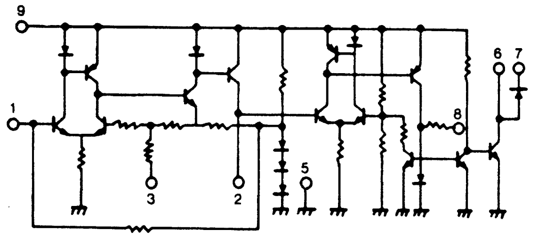

SPK TERMINAL
AUX/PHONO
RESET
5
11
PN106
PN110
POWER
TRANS
AC SOCKET
3
PN101
B TO B
PN102
MAIN
CN106
CN105
CN104
PN103
CD MECH
5
4
8
8
CN804
CN803
CN802
CN801
PN309
8
12
12
7
PN111
ANT. JACK
2
PN109
VR
CN108
B TO B
PN105
PN107
PN104
PN108
H/P
EQ
TUNER
PN309
CN112
CD/DECK
8
PN304
PN305
PN301
PN302
PN306
3
CN102
CN101
4
5
CN112
FRONT
FIP
CN111
CN110
CN107
CN103
RF SW
SW650
CN310
A-DECK
B-DECK
DECK MECH
6
DECK KEY
CN304

INTERIOR BLOCK DIAGRAM OF ICs

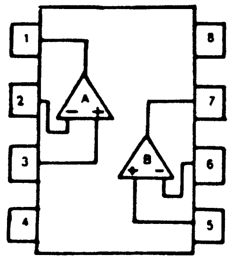
IC101 LA3246(Pre Amp)


IN2F
IN2R
NF2
OUT2
Me Nor OUT2
Me Nor SW
N/H OUT2
Filter OUT
RFC
Vcc
20
19
18
17
16
15
14
13
12
11
300K
Me Nor
1K
Pre2
MIX
OdB
Pre1
Nor
High
Speed
F/R
300K
1
2
3
4
5
6
7
8
9
10
IN1F
IN1H
NF1
OUT1
Me Nor OUT1
Nor High SW
N/H OUT1
MIX OUT
F/R SW
GND

IC102 BA335(APSS)



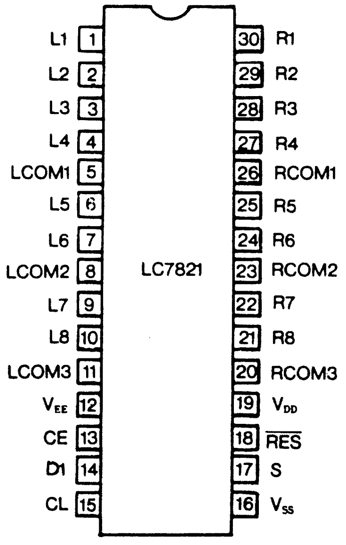
IC101, 103~107, 115, 116, 119, 804 KIA4558P (Op Amp)

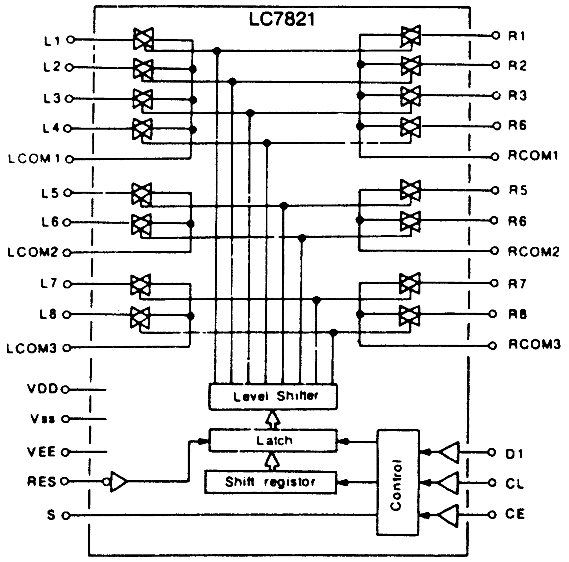

1
2
3
4
5
6
7
8
A
B

Pin Function

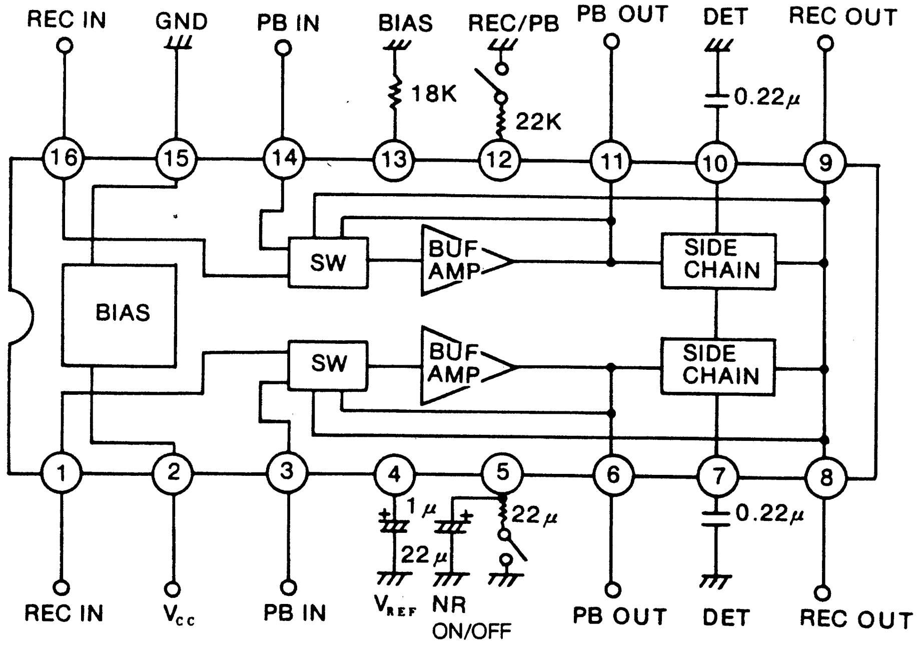
1. A Output
2. A−Input
3. A+Input
4. V−
5. B+Input
6. B−Input
7. B Output
8. V+

IC102 LC7821(Analog Switch)

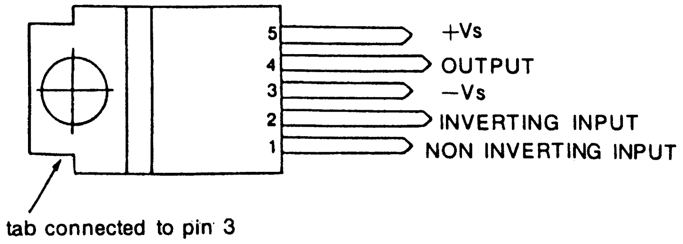

L1 1
L2 2
L3 3
L4 4
LCOM1 5
L5 6
L6 7
LCOM2 8
L7 9
L8 10
LCOM3 11
VEE 12
CE 13
DI 14
CL 15
LC7821
30 R1
29 R2
28 R3
27 R4
26 RCOM1
25 R5
24 R6
23 RCOM2
22 R7
21 R8
20 RCOM3
19 VDD
18 RES
17 S
16 VSS


LC7821
L1
L2
L3
L4
LCOM1
L5
L6
LCOM2
L7
L8
LCOM3
VDD
Vss
VEE
RES
S
R1
R2
R3
R6
RCOM1
R5
R6
RCOM2
R7
R8
RCOM3
Level Shifter
Latch
Shift register
Control
DI
CL
CE

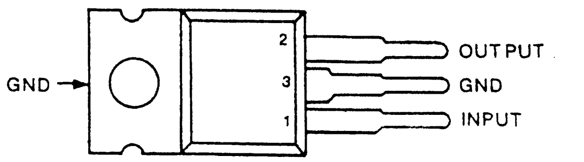
IC103 HA12136A(Dolby-B)


REC IN
GND
PB IN
BIAS
REC/PB
PB OUT
DET
REC OUT
18K
22K
0.22μ
16
15
14
13
12
11
10
9
BIAS
SW
BUF AMP
SIDE CHAIN
SW
BUF AMP
SIDE CHAIN
1
2
3
4
5
6
7
8
1μ
22μ
22μ
0.22μ
REC IN
Vcc
PB IN
VREF
NR ON/OFF
PB OUT
DET
REC OUT

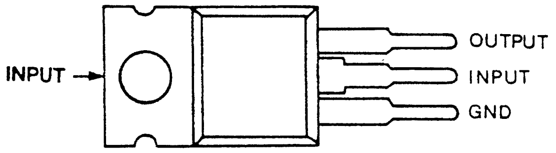
IC109, 110 TDA2050


5
4
3
2
1
+Vs
OUTPUT
−Vs
INVERTING INPUT
NON INVERTING INPUT
tab connected to pin 3

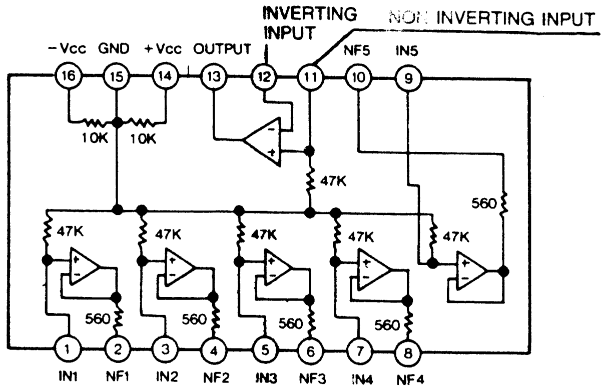
IC111, 113 GL7812 (Voltage Regulator)


GND
2
3
1
OUTPUT
GND
INPUT

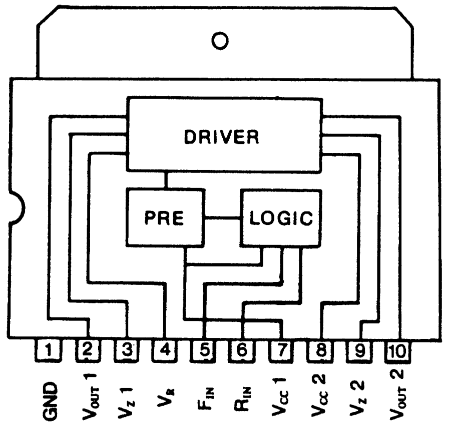
IC112, 114 LM7912CT (Voltage Regulator)


INPUT
OUTPUT
INPUT
GND

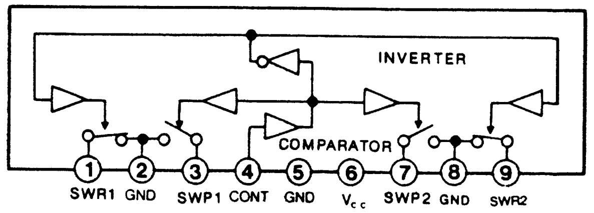
IC117, 118 M5227P(Graphic EQ)


INVERTING INPUT
NON INVERTING INPUT
−Vcc
GND
+Vcc
OUTPUT
NF5
IN5
16
15
14
13
12
11
10
9
10K
10K
47K
560
47K
47K
47K
47K
47K
560
560
560
560
1
2
3
4
5
6
7
8
IN1
NF1
IN2
NF2
IN3
NF3
IN4
NF4

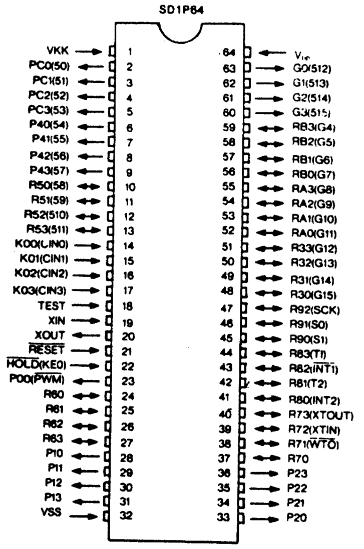
IC120 BA6209(Motor Drive)

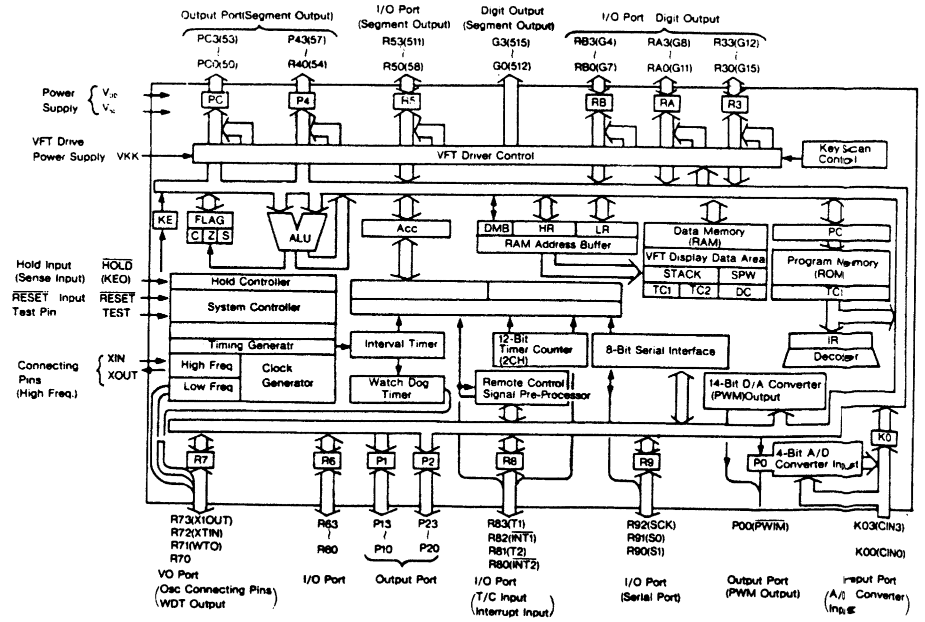

DRIVER
PRE
LOGIC
1
2
3
4
5
6
7
8
9
10
GND
VOUT 1
VZ 1
VR
FIN
RIN
VCC 1
VCC 2
VZ 2
VOUT 2

IC303 μPC1330HA(DECK R/P Switch)

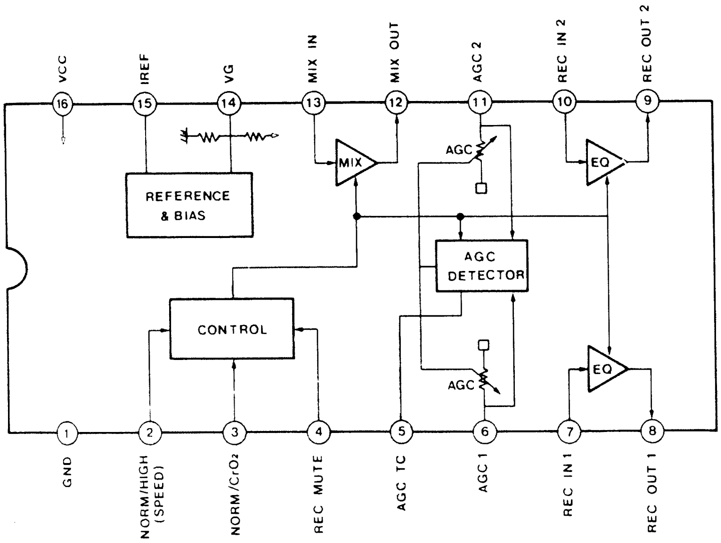

INVERTER
COMPARATOR
1
2
3
4
5
6
7
8
9
SWR1
GND
SWP1
CONT
GND
Vcc
SWP2
GND
SWR2

IC403 TMP47C870(Amp/Tuner Control)

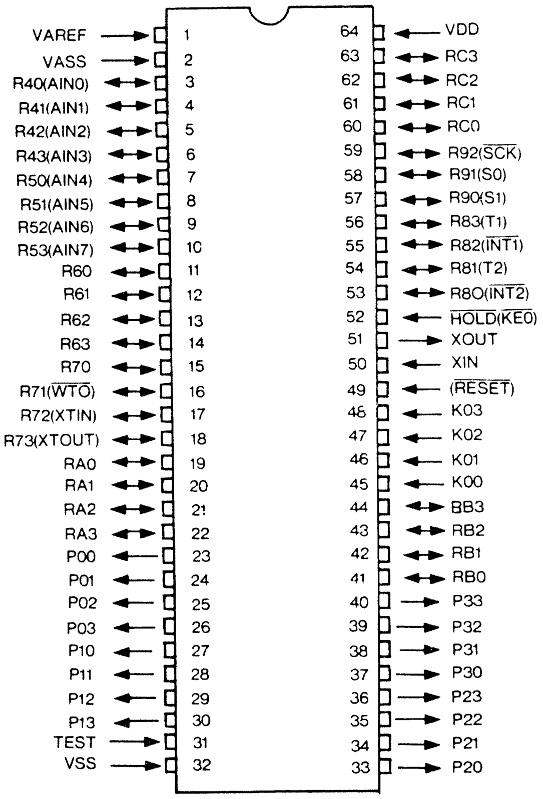

SD1P64
VKK 1
PC0(50) 2
PC1(51) 3
PC2(52) 4
PC3(53) 5
P40(54) 6
P41(55) 7
P42(56) 8
P43(57) 9
R50(58) 10
R51(59) 11
R52(510) 12
R53(511) 13
K00(CIN0) 14
K01(CIN1) 15
K02(CIN2) 16
K03(CIN3) 17
TEST 18
XIN 19
XOUT 20
RESET 21
HOLD(KE0) 22
P00(PWM) 23
R60 24
R61 25
R62 26
R63 27
P10 28
P11 29
P12 30
P13 31
VSS 32
64 Vcc
63 G0(512)
62 G1(513)
61 G2(514)
60 G3(515)
59 RB3(G4)
58 RB2(G5)
57 RB1(G6)
56 RB0(G7)
55 RA3(G8)
54 RA2(G9)
53 RA1(G10)
52 RA0(G11)
51 R33(G12)
50 R32(G13)
49 R31(G14)
48 R30(G15)
47 R92(SCK)
46 R91(S0)
45 R90(S1)
44 R83(T1)
43 R82(INT1)
42 R81(T2)
41 R80(INT2)
40 R73(XTOUT)
39 R72(XTIN)
38 R71(WTO)
37 R70
36 P23
35 P22
34 P21
33 P20

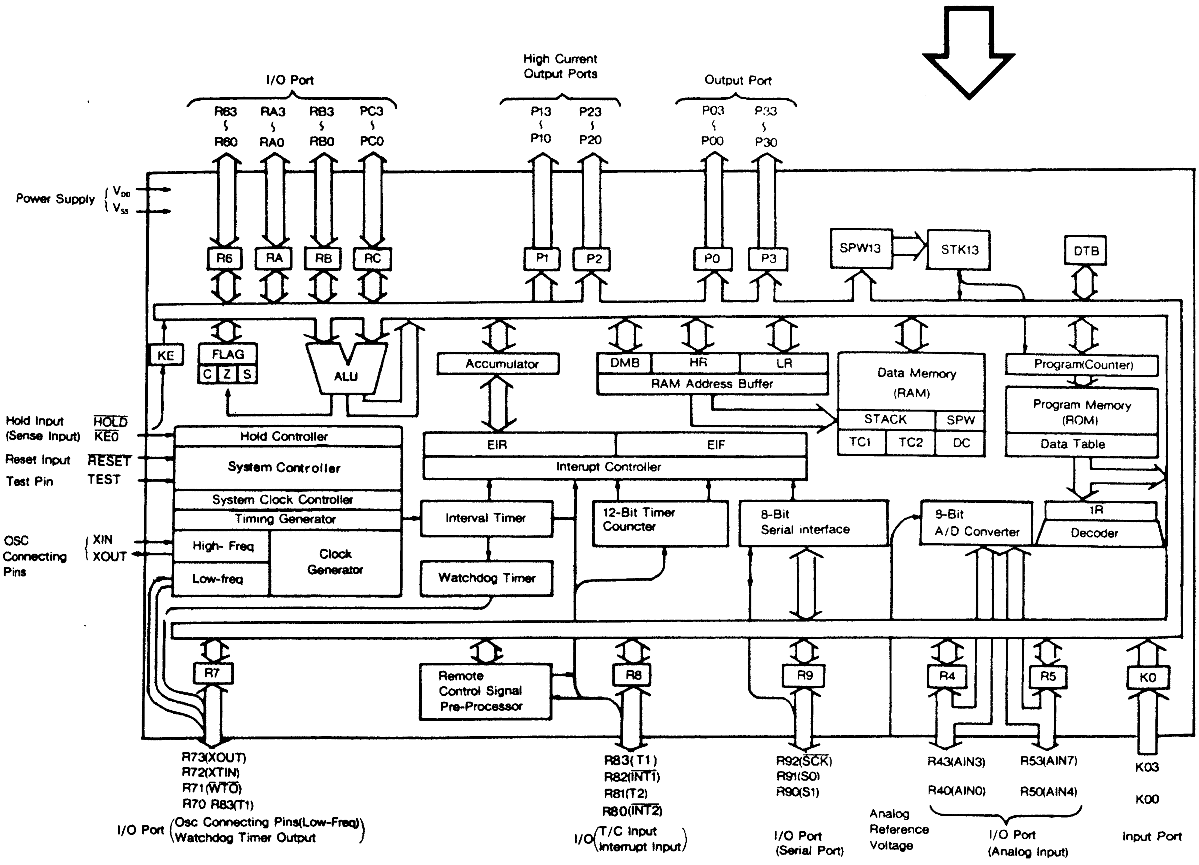

Output Port(Segment Output)
PC3(53)
PC0(50)
P43(57)
R40(54)
I/O Port (Segment Output)
R53(511)
R50(58)
Digit Output (Segment Output)
G3(515)
G0(512)
I/O Port
Digit Output
RB3(G4)
RB0(G7)
RA3(G8)
RA0(G11)
R33(G12)
R30(G15)
Power Supply
Vcc
Vss
VFT Drive Power Supply
VKK
PC
P4
R5
RB
RA
R3
VFT Driver Control
Key Scan Control
KE
FLAG
C Z S
ALU
Acc
DMB
HR
LR
RAM Address Buffer
Data Memory (RAM)
VFT Display Data Area
STACK
SPW
TC1
TC2
DC
PC
Program Memory (ROM)
TC
Hold Input (Sense Input)
HOLD (KEO)
RESET Input
RESET
Test Pin
TEST
Hold Controller
System Controller
Timing Generatr
Interval Timer
12-Bit Timer Counter (2CH)
8-Bit Serial Interface
IR Decoder
Connecting Pins (High Freq.)
XIN
XOUT
High Freq
Low Freq
Clock Generator
Watch Dog Timer
Remote Control Signal Pre-Processor
14-Bit D/A Converter (PWM)Output
K0
R7
R6
P1
P2
R8
R9
P0
4-Bit A/D Converter Input
R73(X1OUT)
R72(XTIN)
R71(WTO)
R70
I/O Port (Osc Connecting Pins WDT Output)
R63
R60
I/O Port
P13
P10
P23
P20
Output Port
R83(T1)
R82(INT1)
R81(T2)
R80(INT2)
I/O Port (T/C Input Interrupt Input)
R92(SCK)
R91(S0)
R90(S1)
I/O Port (Serial Port)
P00(PWM)
Output Port (PWM Output)
K03(CIN3)
K00(CIN0)
Input Port (A/D Converter Input)

IC301 CXA1298AP(Recording Equalizer Amplifier)

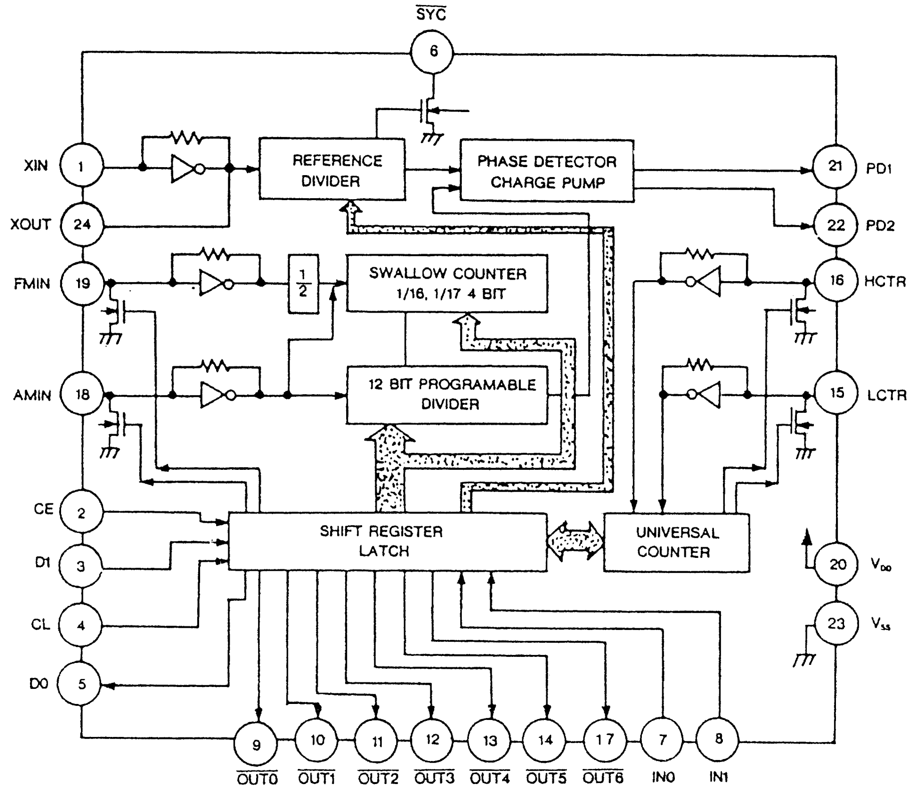

VCC
IREF
VG
MIX IN
MIX OUT
AGC 2
REC IN 2
REC OUT 2
16
15
14
13
12
11
10
9
REFERENCE & BIAS
MIX
AGC
EQ
AGC DETECTOR
CONTROL
AGC
EQ
1
2
3
4
5
6
7
8
GND
NORM/HIGH (SPEED)
NORM/CrO2
REC MUTE
AGC TC
AGC 1
REC IN 1
REC OUT 1

IC601 TMP47C1260N (Deck/CD Control)

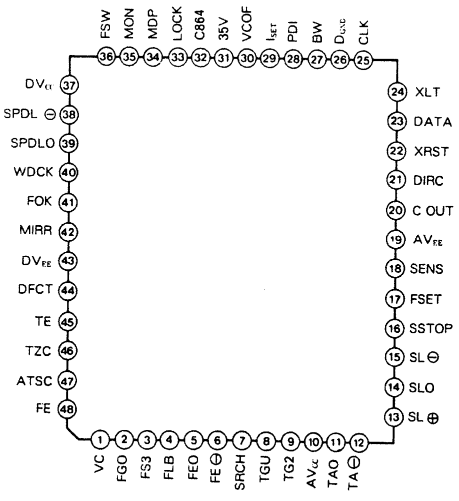

VAREF 1
VASS 2
R40(AIN0) 3
R41(AIN1) 4
R42(AIN2) 5
R43(AIN3) 6
R50(AIN4) 7
R51(AIN5) 8
R52(AIN6) 9
R53(AIN7) 10
R60 11
R61 12
R62 13
R63 14
R70 15
R71(WTO) 16
R72(XTIN) 17
R73(XTOUT) 18
RA0 19
RA1 20
RA2 21
RA3 22
P00 23
P01 24
P02 25
P03 26
P10 27
P11 28
P12 29
P13 30
TEST 31
VSS 32
64 VDD
63 RC3
62 RC2
61 RC1
60 RC0
59 R92(SCK)
58 R91(S0)
57 R90(S1)
56 R83(T1)
55 R82(INT1)
54 R81(T2)
53 R80(INT2)
52 HOLD(KE0)
51 XOUT
50 XIN
49 (RESET)
48 K03
47 K02
46 K01
45 K00
44 BB3
43 RB2
42 RB1
41 RB0
40 P33
39 P32
38 P31
37 P30
36 P23
35 P22
34 P21
33 P20

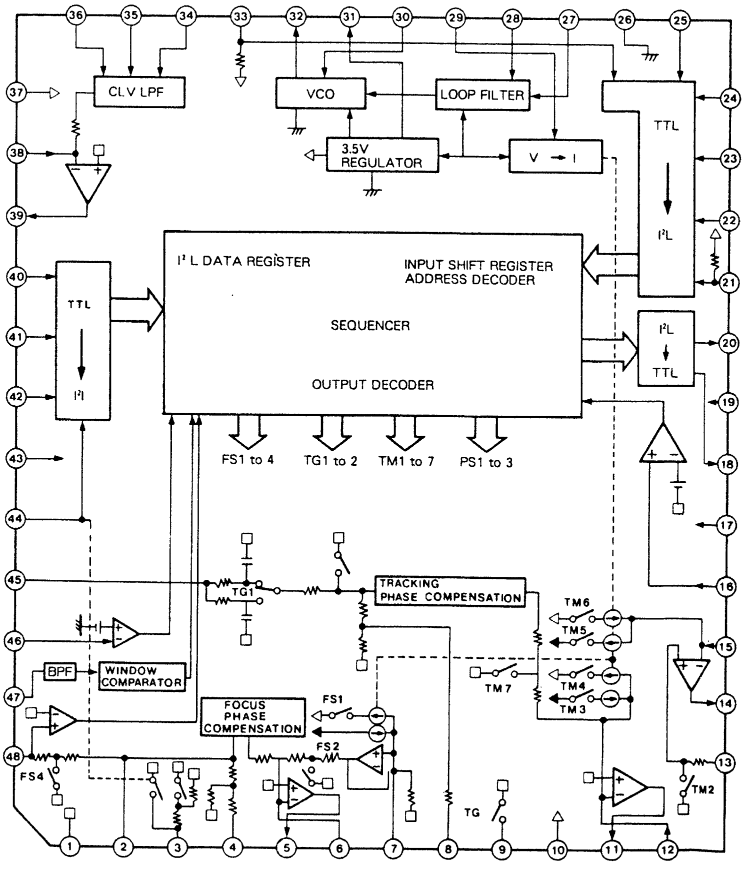

I/O Port
R63 ~ R60
RA3 ~ RA0
RB3 ~ RB0
PC3 ~ PC0
High Current Output Ports
P13 ~ P10
P23 ~ P20
Output Port
P03 ~ P00
P33 ~ P30
Power Supply
VDD
VSS
R6
RA
RB
RC
P1
P2
P0
P3
SPW13
STK13
DTB
KE
FLAG
C Z S
ALU
Accumulator
DMB
HR
LR
RAM Address Buffer
Data Memory (RAM)
STACK
SPW
TC1
TC2
DC
Program(Counter)
Program Memory (ROM)
Data Table
Hold Input (Sense Input)
HOLD
KE0
Reset Input
RESET
Test Pin
TEST
Hold Controller
System Controller
System Clock Controller
Timing Generator
EIR
EIF
Interupt Controller
OSC Connecting Pins
XIN
XOUT
High-Freq
Low-freq
Clock Generator
Interval Timer
Watchdog Timer
12-Bit Timer Councter
8-Bit Serial interface
8-Bit A/D Converter
IR
Decoder
R7
Remote Control Signal Pre-Processor
R8
R9
R4
R5
K0
R73(XOUT)
R72(XTIN)
R71(WTO)
R70 R83(T1)
I/O Port (Osc Connecting Pins(Low-Freq) Watchdog Timer Output)
R83(T1)
R82(INT1)
R81(T2)
R80(INT2)
I/O (T/C Input Interrupt Input)
R92(SCK)
R91(S0)
R90(S1)
I/O Port (Serial Port)
Analog Reference Voltage
R43(AIN3)
R40(AIN0)
R53(AIN7)
R50(AIN4)
I/O Port (Analog Input)
K03
K00
Input Port

IC702 LC7218(PLL)

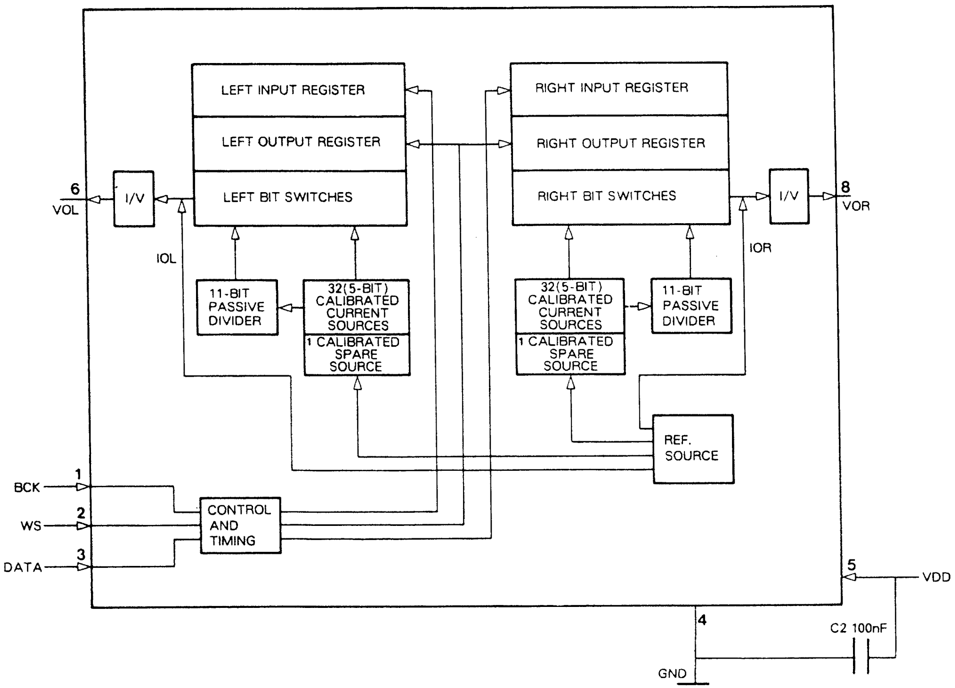

SYC
6
XIN 1
XOUT 24
FMIN 19
AMIN 18
CE 2
D1 3
CL 4
D0 5
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
1/2
SWALLOW COUNTER 1/16, 1/17 4 BIT
12 BIT PROGRAMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
21 PD1
22 PD2
16 HCTR
15 LCTR
20 V_DD
23 V_SS
9 OUT0
10 OUT1
11 OUT2
12 OUT3
13 OUT4
14 OUT5
17 OUT6
7 IN0
8 IN1

IC802 KA8309(ASP)

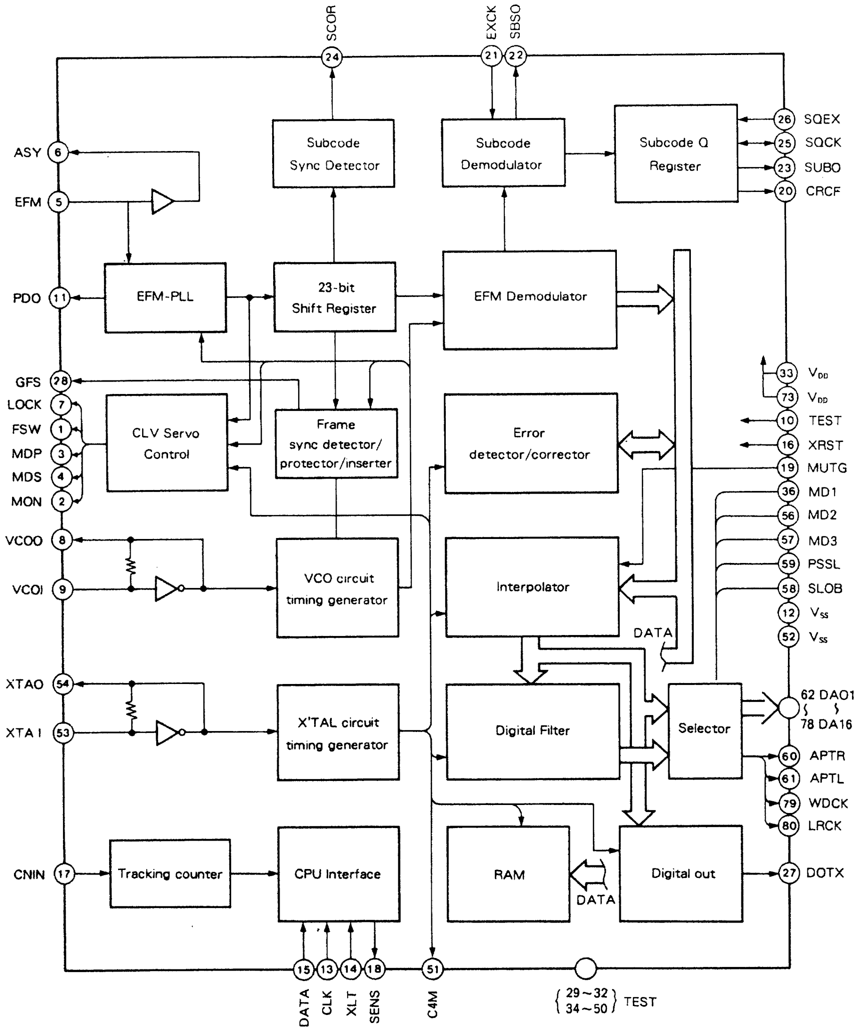

FSW 36
MON 35
MDP 34
LOCK 33
C864 32
35V 31
VCOF 30
I_SET 29
PDI 28
BW 27
D_GVC 26
CLK 25
DVcc 37
SPDL ⊖ 38
SPDLO 39
WDCK 40
FOK 41
MIRR 42
DV_EE 43
DFCT 44
TE 45
TZC 46
ATSC 47
FE 48
24 XLT
23 DATA
22 XRST
21 DIRC
20 C OUT
19 AV_EE
18 SENS
17 FSET
16 SSTOP
15 SL⊖
14 SLO
13 SL⊕
1 VC
2 FGO
3 FS3
4 FLB
5 FEO
6 FE⊖
7 SRCH
8 TGU
9 TG2
10 AVcc
11 TAO
12 TA⊖


CLV LPF
VCO
LOOP FILTER
3.5V REGULATOR
V → I
TTL
I²L
I² L DATA REGISTER
INPUT SHIFT REGISTER ADDRESS DECODER
SEQUENCER
OUTPUT DECODER
FS1 to 4
TG1 to 2
TM1 to 7
PS1 to 3
BPF
WINDOW COMPARATOR
TRACKING PHASE COMPENSATION
FOCUS PHASE COMPENSATION
TG1
FS1
FS2
FS4
TG
TM1
TM2
TM3
TM4
TM5
TM6
TM7

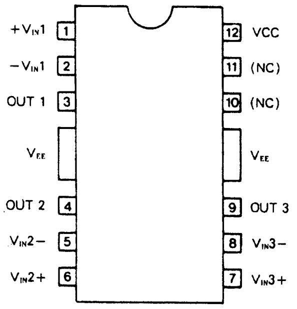
IC803 TDA1311(DAC)


LEFT INPUT REGISTER
LEFT OUTPUT REGISTER
LEFT BIT SWITCHES
RIGHT INPUT REGISTER
RIGHT OUTPUT REGISTER
RIGHT BIT SWITCHES
I/V
I/V
6
VOL
8
VOR
IOL
IOR
11-BIT PASSIVE DIVIDER
32(5-BIT) CALIBRATED CURRENT SOURCES
1 CALIBRATED SPARE SOURCE
32(5-BIT) CALIBRATED CURRENT SOURCES
1 CALIBRATED SPARE SOURCE
11-BIT PASSIVE DIVIDER
REF. SOURCE
CONTROL AND TIMING
1
BCK
2
WS
3
DATA
5
VDD
4
C2 100nF
GND

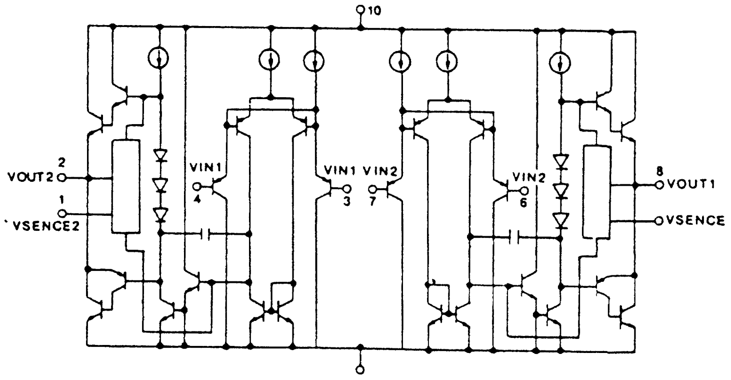
IC805 KS5990(DSP)


SCOR
24
EXCK
21
SBSO
22
Subcode Sync Detector
Subcode Demodulator
Subcode Q Register
26 SQEX
25 SQCK
23 SUBO
20 CRCF
ASY 6
EFM 5
PDO 11
EFM-PLL
23-bit Shift Register
EFM Demodulator
33 VDD
73 VDD
10 TEST
16 XRST
19 MUTG
36 MD1
56 MD2
57 MD3
59 PSSL
58 SLOB
12 Vss
52 Vss
GFS 28
LOCK 7
FSW 1
MDP 3
MDS 4
MON 2
CLV Servo Control
Frame sync detector/ protector/inserter
Error detector/corrector
VCOO 8
VCOI 9
VCO circuit timing generator
Interpolator
DATA
XTAO 54
XTA I 53
X'TAL circuit timing generator
Digital Filter
Selector
62 DAO1
78 DA16
60 APTR
61 APTL
79 WDCK
80 LRCK
CNIN 17
Tracking counter
CPU Interface
RAM
DATA
Digital out
27 DOTX
15 DATA
13 CLK
14 XLT
18 SENS
51 C4M
29~32 34~50 TEST

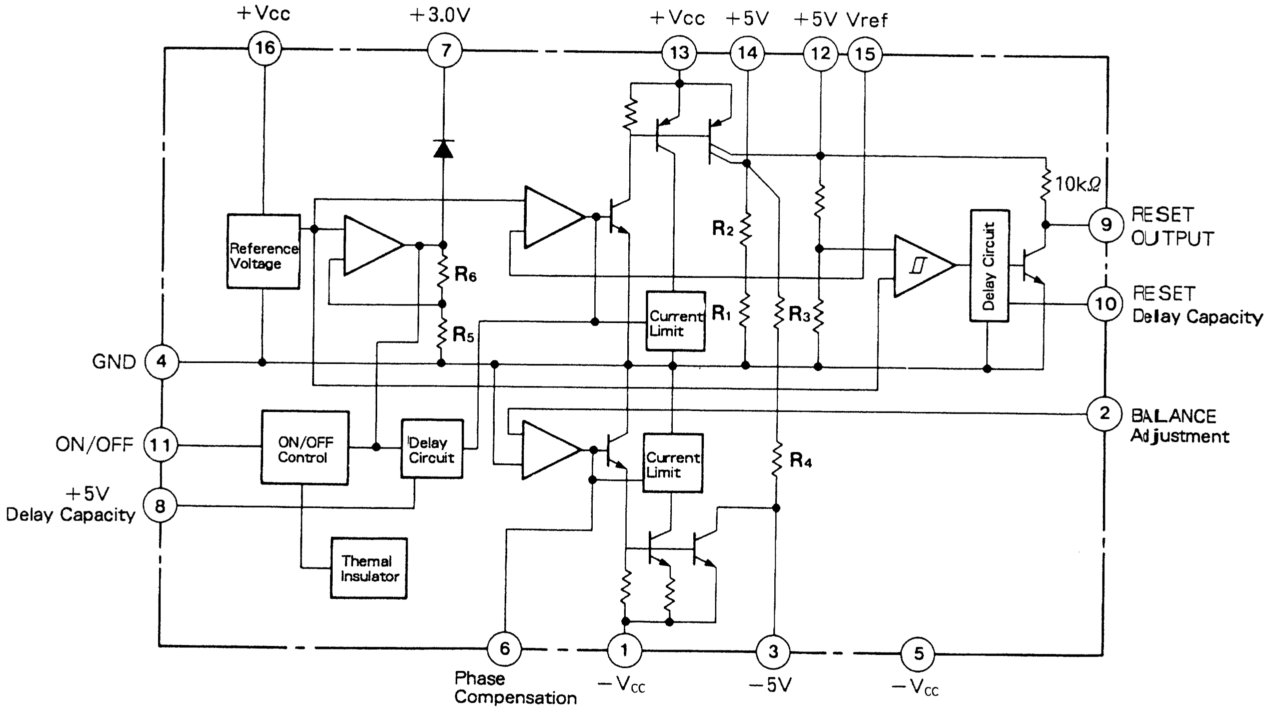
IC806 LA6520(Drive)


+VIN1 1
−VIN1 2
OUT 1 3
VEE
OUT 2 4
VIN2− 5
VIN2+ 6
12 VCC
11 (NC)
10 (NC)
VEE
9 OUT 3
8 VIN3−
7 VIN3+

IC807 KA9256(CD Drive)

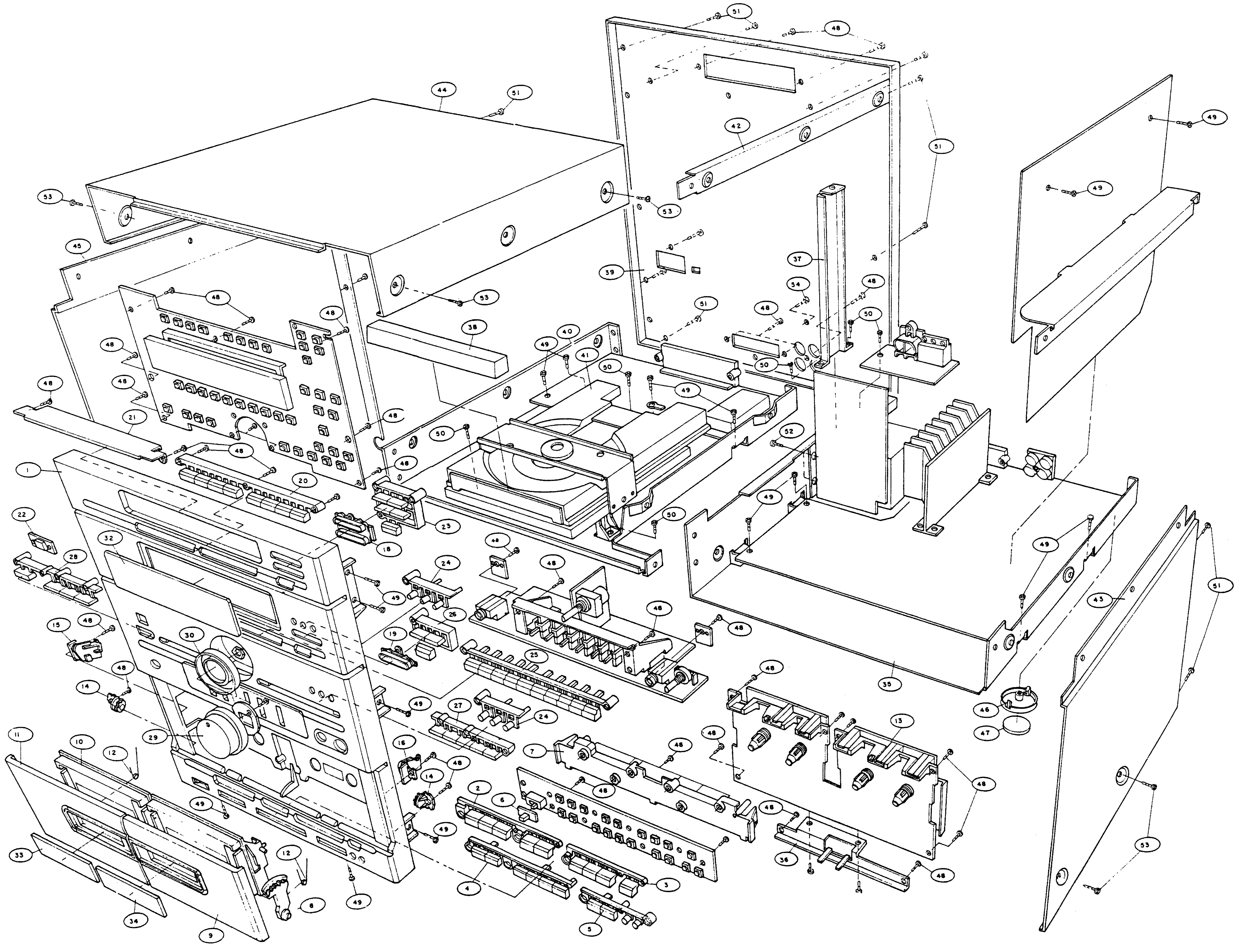

10
2
VOUT2
1
VSENCE2
VIN1
4
VIN1
3
VIN2
7
VIN2
6
8
VOUT1
VSENCE

IC809 M5294P(±5V Regulator)


+Vcc
16
+3.0V
7
+Vcc
13
+5V
14
+5V Vref
12
15
10kΩ
9
RESET OUTPUT
10
RESET Delay Capacity
2
BALANCE Adjustment
Reference Voltage
R6
R5
R2
R1
R3
R4
Current Limit
Current Limit
Delay Circuit
GND
4
ON/OFF
11
ON/OFF Control
Delay Circuit
+5V Delay Capacity
8
Themal Insulator
6
Phase Compensation
1
−Vcc
3
−5V
5
−Vcc

EXPLODED VIEW/PARTS LIST

●CABINET

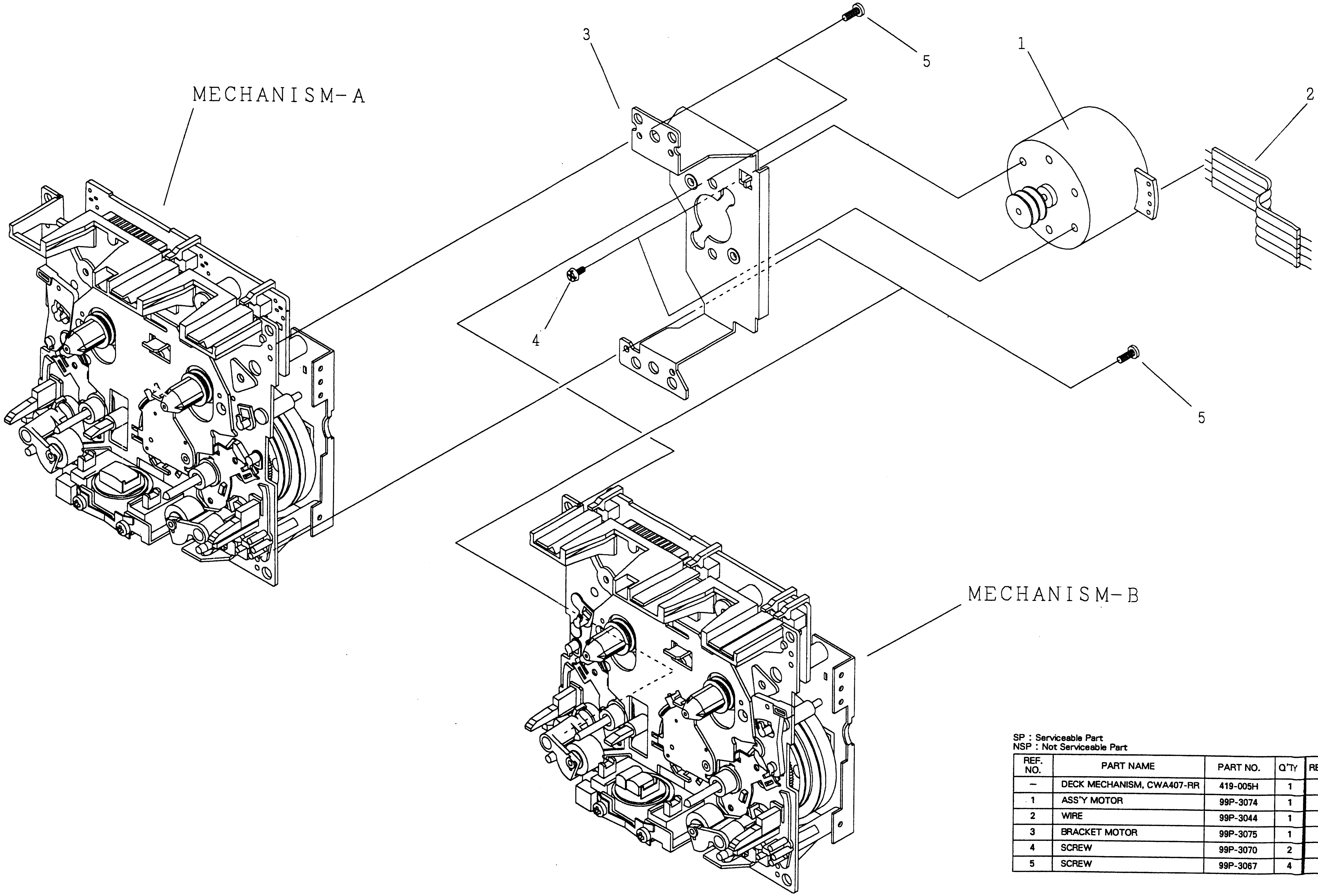


SP : Serviceable Part
NSP : Not Serviceable Part

REF. NO.	DESCRIPTION	PART NO.	Q'TY	REMARK	LOCA-TION
1	Panel, Front	3720S-0003C	1	SP	E1
2	Knob, Play-Left	4940S-0147B	1	SP	G4
3	Knob-Play-Right	4940S-0148B	1	SP	G5
4	Knob, Deck-Left	4940S-0149A	1	SP	G4
5	Knob, Deck-Right	4940S-0150A	1	SP	H5
6	Knob, Slide	4940S-0151A	1	SP	G4
7	Holder, Deck	324-288A	1	SP	G5
8	Holder, Cassette-B	324-306A	1	SP	H3
9	Door, Cassette-B	226-321B	1	SP	H2
10	Holder, Cassette-A	324-305A	1	SP	F1
11	Door, Cassette-A	226-320B	1	SP	G1
12	Spring, Door	442-750D	2	SP	G3
13	Deck Mechanism, CWA407-RR	419-005H	1	SP	F7
14	Damper Assembly	444-111A	1	SP	F1
15	Guide Assembly, Eject-Left	384-012A	1	SP	F1
16	Guide Assembly, Eject-Right	384-013A	1	SP	G4
18	Decoration, Knob	246-084A	1	SP	E3
19	Decoration, Knob	246-084B	1	SP	F4
20	Knob, CD Function	4940S-0141B	1	SP	E3
21	Bracket, Top	4810S-0009A	1	SP	D2
22	Lens, Remote	4940S-0140A	1	SP	E1
23	Knob, CD Play	463-022A	2	SP	E4
24	Knob, Tuner	4940S-0142A	1	SP	E4
25	Knob, Preset	4940S-0143A	1	SP	F4
26	Knob, Tuning	4940S-0144A	1	SP	F4
27	Knob, Amp Function	4940S-0145A	1	SP	F4
28	Knob, Power	4940S-0146A	1	SP	E1
29	Knob, Volume	4940S-0152A	1	SP	F2
30	Decoration, Volume	246-083A	1	SP	F2
32	Window, Display	236-386A	1	SP	E2
33	Window, Cassette Door-Left	236-432A	1	SP	G1
34	Window, Cassette Door-Right	236-433A	1	SP	H2
35	Chassis Sub Assembly, Main	3141SU0006A	1	SP	F7
36	Bracket, Deck	4810S-0018A	1	SP	G6
37	Bracket, Guide	4810S-0012A	1	SP	C6
38	Door, CD	226-322B	1	SP	D4
39	Plate, Back	256-091C	1	SP	C5
40	Bracket, CD	4810S-0116A	1	SP	D5
41	Deck Sub Assembly, MCD-350GA	410-050E	1	SP	D5
42	Bracket, Cabinet	4810S-0014A	1	SP	B6
43	Cabinet, Side-Right	213-016A	1	SP	E9
44	Cabinet, Top	213-017A	1	SP	B4
45	Cabinet, Side-Left	213-015A	1	SP	C1
46	Foot	265-012A	2	SP	F8
47	Felt	472-610K	2	SP	F8
48	Screw, Special 3×10	353-025C	4	SP	B7
49	Screw, 3×6	1TRL0302018	2	SP	B9
50	Screw, 3×8	1TRL0302418	3	SP	D4
51	Screw, 3×6	1TRL0302016	1	SP	A6
52	Screw, 4×8	1TR0402418	4	SP	D6
53	Screw, Special	353-647A	8	SP	C1
54	Screw, 3×10	353-052A	1	SP	C6

EXPLODED VIEW/PARTS LIST

● TAPE DECK MECHANISM

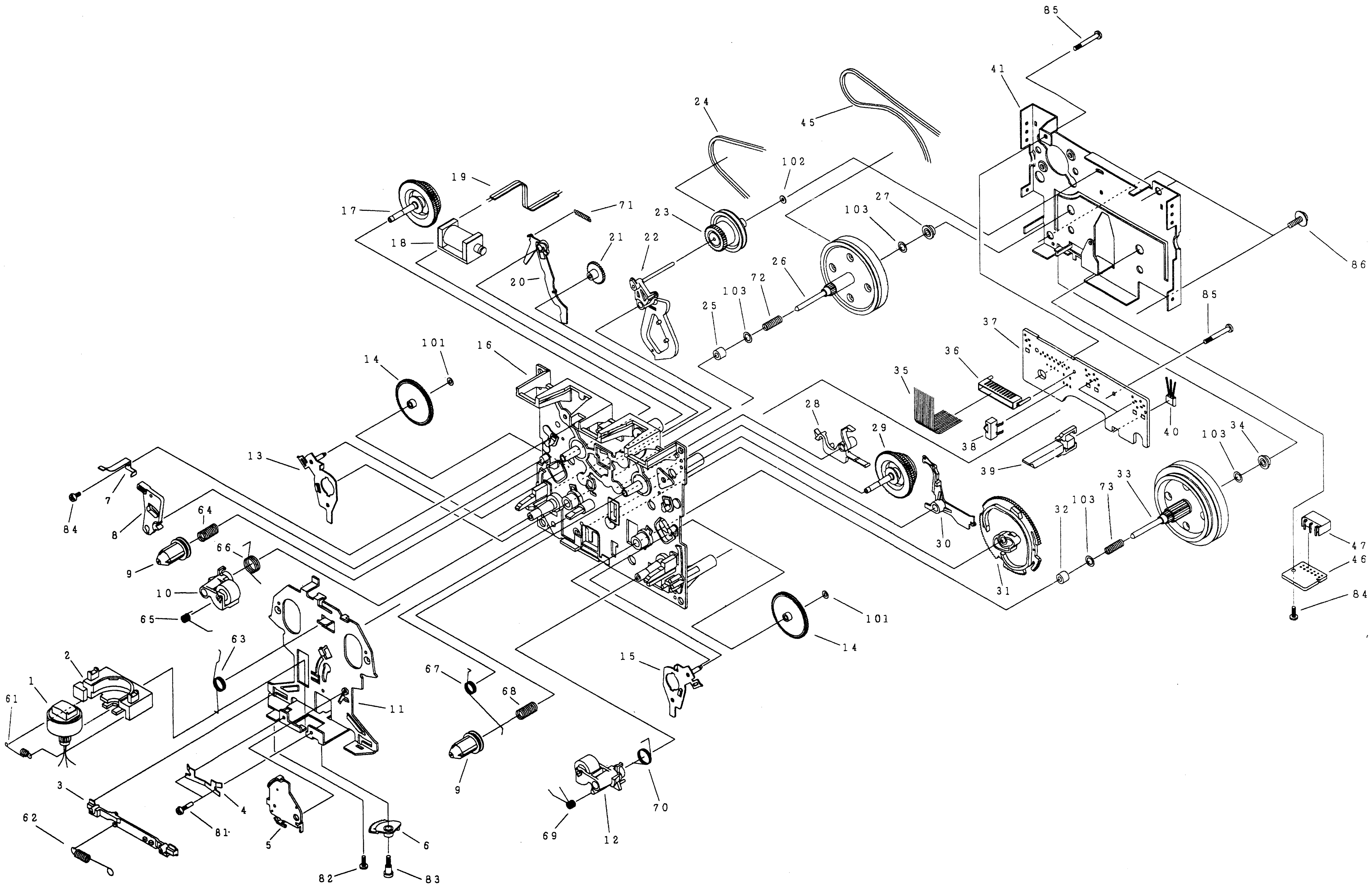


SP : Serviceable Part
NSP : Not Serviceable Part

REF. NO.	PART NAME	PART NO.	Q'TY	REMARK
—	DECK MECHANISM, CWA407-RR	419-005H	1	SP
1	ASS'Y MOTOR	99P-3074	1	SP
2	WIRE	99P-3044	1	NSP
3	BRACKET MOTOR	99P-3075	1	SP
4	SCREW	99P-3070	2	SP
5	SCREW	99P-3067	4	NSP

EXPLODED VIEW/PARTS LIST

●TAPE DECK MECHANISM-A

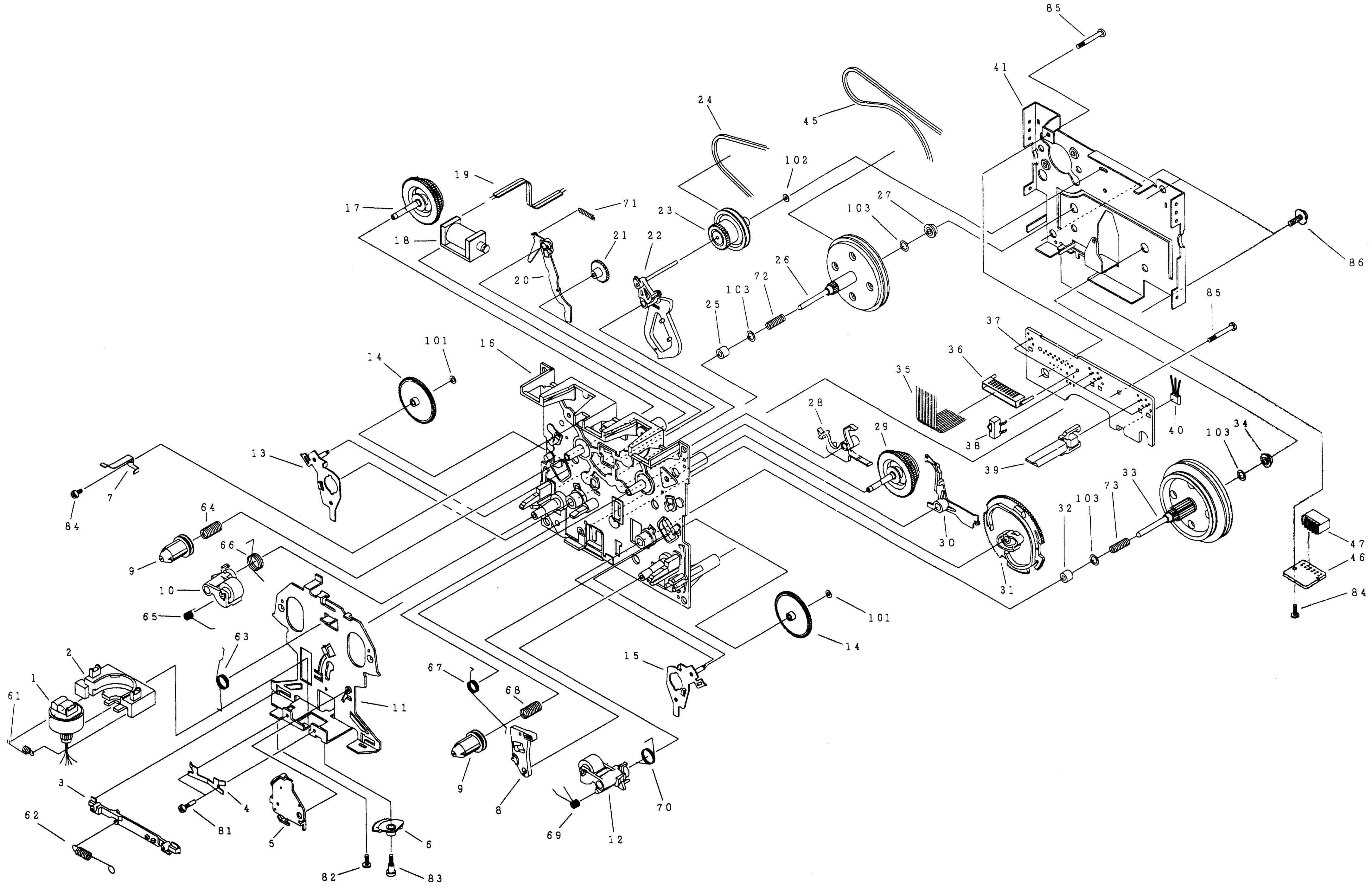


SP : Serviceable Part
NSP : Not Serviceable Part

REF. NO.	PART NAME	PART NO.	Q'TY	REMARK
1	ASS'Y HOLDER HEAD	99P-3076	1	SP
2	FLAME HEAD	99P-3002	1	NSP
3	LEVER HEAD	99P-3003	1	NSP
4	SPRING AZIMUTH	99P-3004	1	NSP
5	ASS'Y ARM ASSIST	99P-3005	1	NSP
6	GEAR ARM HEAD	99P-3006	1	NSP
7	SPRING CASSETTE	99P-3007	1	NSP
8	EJECT LOCK	99P-3008	1	NSP
9	CAP REEL	99P-3009	2	NSP
10	ASS'Y PINCH ARM L	99P-3010	1	NSP
11	CHASSIS HEAD	99P-3011	1	NSP
12	ASS'Y PINCH ARM R	99P-3012	1	NSP
13	ASS'Y ARM PLAY L	99P-3013	1	NSP
14	GEAR PLAY	99P-3014	2	NSP
15	ASS'Y ARM PLAY R	99P-3015	1	NSP
16	CHASSIS OS.	99P-3016	1	NSP
17	ASS'Y SUR REEL L	99P-3017	1	NSP
18	SOLENOID	99P-3077	1	SP
19	WIRE	99P-3019	1	SP
20	ARM RVS	99P-3020	1	SP
21	GEAR FF	99P-3021	1	NSP
22	ASS'Y ARM FR	99P-3022	1	NSP
23	ASS'Y PULLEY FR	99P-3023	1	NSP
24	BELT FR	99P-3024	1	NSP
25	METAL	99P-3025	1	NSP
26	ASS'Y FLYWHEEL L	99P-3026	1	SP
27	METAL	99P-3027	1	NSP
28	ARM BRAKE	99P-3028	1	NSP
29	ASS'Y SUB REEL R	99P-3029	1	NSP
30	ARM TRIGER	99P-3030	1	NSP
31	GEAR CAM	99P-3031	1	NSP
32	METAL	99P-3032	1	NSP
33	ASS'Y FLYWHEEL R	99P-3033	1	SP
34	METAL	99P-3034	1	NSP
35	WIRE (11P)	99P-3078	1	SP
36	HOLDER WIRE	99P-3036	1	SP
37	P.C. BOARD	99P-3037	1	SP
38	SWITCH MODE	99P-3038	1	SP
39	SWITCH (LEAF)	99P-3039	2	SP
40	HALL IC.	99P-3040	1	SP
45	BELT MAIN	99P-3070	1	SP
46	P.C. BOARD	99P-3046	1	SP
47	HOUSING	99P-3050	1	SP
61	SPRING	99P-3051	1	NSP
62	SPRING	99P-3052	1	NSP
63	SPRING	99P-3053	1	NSP
64	SPRING	99P-3054	1	NSP
65	SPRING	99P-3055	1	NSP
66	SPRING	99P-3056	1	NSP
67	SPRING	99P-3057	1	NSP
68	SPRING	99P-3058	1	NSP
69	SPRING	99P-3059	1	NSP
70	SPRING	99P-3060	1	NSP
71	SPRING	99P-3061	1	NSP
72	SPRING	99P-3062	1	NSP
73	SPRING	99P-3063	1	NSP
81	SCREW	99P-3064	2	NSP
82	SCREW	99P-3065	1	NSP
83	SCREW	99P-3066	1	NSP
84	SCREW	99P-3067	2	NSP
85	SCREW	99P-3068	2	NSP
86	SCREW	99P-3069	3	NSP
101	WASHER	99P-3071	2	NSP
102	WASHER	99P-3072	1	NSP
103	WASHER	99P-3073	4	NSP

EXPLODED VIEW/PARTS LIST

●TAPE DECK MECHANISM-B

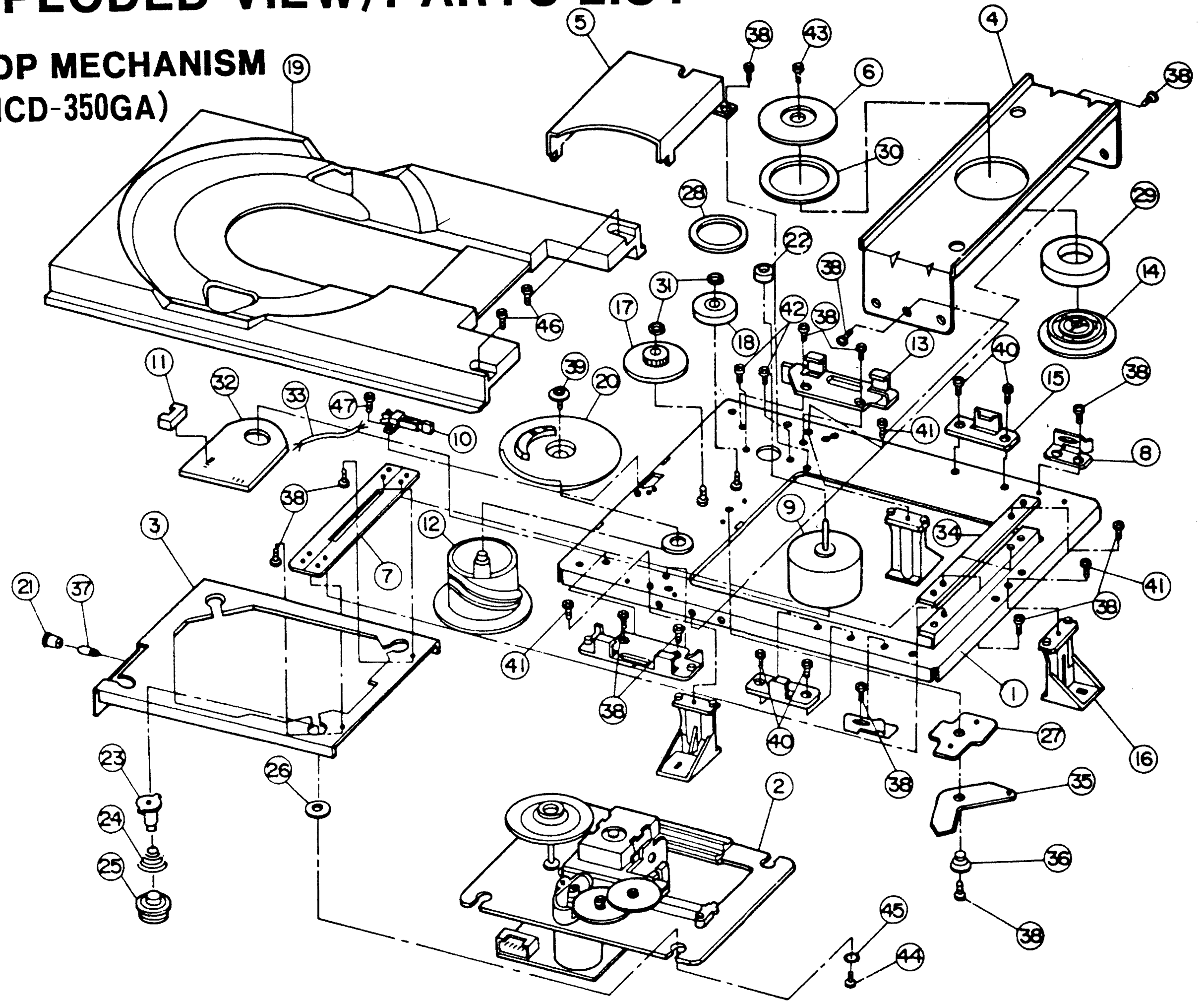


SP : Serviceable Part
NSP : Not Serviceable Part

REF. NO.	PART NAME	PART NO.	Q'TY	REMARK
1	ASS'Y HOLDER HEAD	99P-3084	1	SP
2	FLAME HEAD	99P-3002	1	NSP
3	LEVER HEAD	99P-3003	1	NSP
4	SPRING AZIMUTH	99P-3004	1	NSP
5	ASS'Y ARM ASSIST	99P-3005	1	NSP
6	GEAR ARM HEAD	99P-3006	1	NSP
7	SPRING CASSETTE	99P-3007	1	NSP
8	EJECT LOCK	99P-3008	1	NSP
9	CAP REEL	99P-3009	2	NSP
10	ASS'Y PINCH ARM L	99P-3010	1	NSP
11	CHASSIS HEAD	99P-3011	1	NSP
12	ASS'Y PINCH ARM R	99P-3012	1	NSP
13	ASS'Y ARM PLAY L	99P-3013	1	NSP
14	GEAR PLAY	99P-3014	2	NSP
15	ASS'Y ARM PLAY R	99P-3015	1	NSP
16	CHASSIS OS.	99P-3016	1	NSP
17	ASS'Y SUR REEL L	99P-3017	1	NSP
18	SOLENOID	99P-3077	1	SP
19	WIRE	99P-3019	1	SP
20	ARM RVS	99P-3020	1	SP
21	GEAR FF	99P-3021	1	NSP
22	ASS'Y ARM FR	99P-3022	1	NSP
23	ASS'Y PULLEY FR	99P-3023	1	NSP
24	BELT FR	99P-3024	1	NSP
25	METAL	99P-3025	1	NSP
26	ASS'Y FLYWHEEL L	99P-3081	1	SP
27	METAL	99P-3027	1	NSP
28	ARM BRAKE	99P-3028	1	NSP
29	ASS'Y SUB REEL R	99P-3029	1	NSP
30	ARM TRIGER	99P-3030	1	NSP
31	GEAR CAM	99P-3031	1	NSP
32	METAL	99P-3032	1	NSP
33	ASS'Y FLYWHEEL R2	99P-3082	1	SP
34	METAL	99P-3034	1	NSP
35	WIRE (13P)	99P-3035	1	SP
36	HOLDER WIRE	99P-3036	1	SP
37	P.C. BOARD	99P-3037	1	SP
38	SWITCH MODE	99P-3038	1	SP
39	SWITCH (LEAF)	99P-3039	4	SP
40	HALL IC.	99P-3040	1	SP
41	BRACKET FW	99P-3041	1	SP
45	BELT MAIN	99P-3083	1	SP
46	P.C. BOARD	99P-3046	1	SP
47	HOUSING	99P-3047	1	SP
61	SPRING	99P-3051	1	NSP
62	SPRING	99P-3052	1	NSP
63	SPRING	99P-3053	1	NSP
64	SPRING	99P-3054	1	NSP
65	SPRING	99P-3055	1	NSP
66	SPRING	99P-3056	1	NSP
67	SPRING	99P-3057	1	NSP
68	SPRING	99P-3058	1	NSP
69	SPRING	99P-3059	1	NSP
70	SPRING	99P-3060	1	NSP
71	SPRING	99P-3061	1	NSP
72	SPRING	99P-3062	1	NSP
73	SPRING	99P-3063	1	NSP
81	SCREW	99P-3064	2	NSP
82	SCREW	99P-3065	1	NSP
83	SCREW	99P-3066	1	NSP
84	SCREW	99P-3067	2	NSP
85	SCREW	99P-3068	2	NSP
86	SCREW	99P-3069	3	NSP
101	WASHER	99P-3071	2	NSP
102	WASHER	99P-3072	1	NSP
103	WASHER	99P-3073	4	NSP

EXPLODED VIEW/PARTS LIST

●CDP MECHANISM (MCD-350GA)

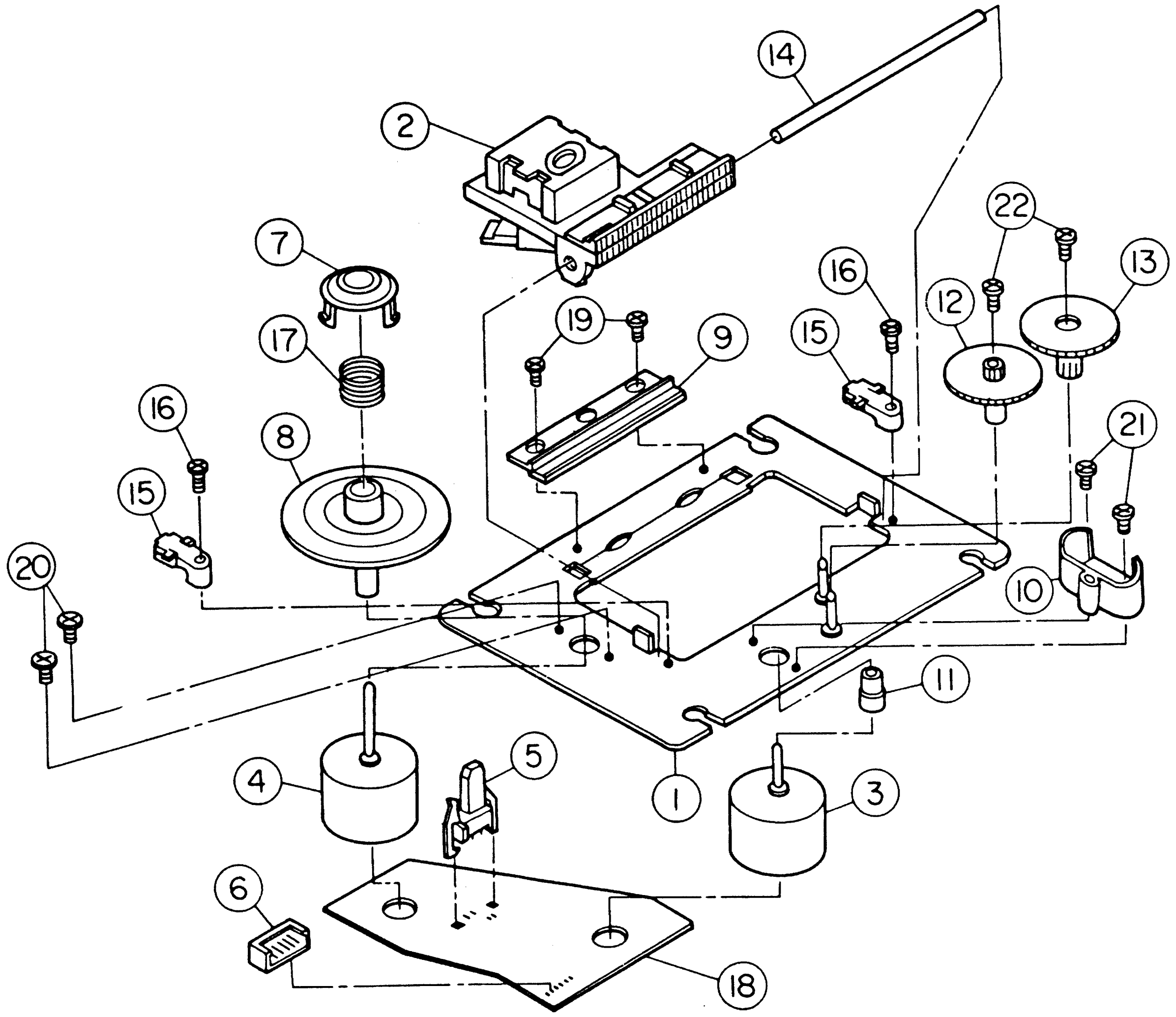


REF NO.	DESCRIPTION	PART NO.	Q'TY
	MECHANISM ASS'Y MCD-350GA	411-050E	
1	BASE MECHANISM	88S-0001	1
2	MCD 350 ASS Y	88S-0002	1
3	BASE HOLDER	88S-0003	1
4	SUPPORTER CLAMP	88S-0004	1
5	GEAR COVER	88S-0005	1
6	CLAMP MAGNET	88S-0006	1
7	HINGE SPRING	88S-0007	1
8	SPRING TRAY GUIDE-R, L	88S-0079	1
9	MOTOR LOADING	88S-0010	1
10	LEAF SWITCH	88S-0011	1
11	CONNECTOR	88S-0014	1
12	CAM PU	88S-0012	1
13	GUIDE TRAY	88S-0013	2
14	CLAMP DISC	88S-0015	1
15	HOLDER TRAY	88S-0016	2
16	LEG MECHANISM "R"	88S-0076	1
16	LEG MECHANISM "C"	88S-0077	1
16	LEG MECHANISM "L"	88S-0078	1
17	GEAR IDLE	88S-0018	1
18	PULLEY GEAR	88S-0019	1
19	TRAY DISC	88S-0020	1
20	GEAR TRAVERSE	88S-0021	1
21	BUSHING	88S-0022	1
22	PULLEY MOTOR	88S-0023	1
23	SUPORTER "A" RUBBER	88S-0024	4
24	SPRING INSULATOR-F	88S-0025	2
24	SPRING INSULATOR-R	88S-0026	1

REF.NO.	DESCRIPTION	PART NO.	Q'TY
25	BASE PU CUSHION	88S-0027	4
26	SUPPORTER "B" RUBBER	88S-0028	4
27	BASE STOPPER	88S-0029	1
28	BELT	88S-0030	1
29	MAGNET	88S-0031	1
30	FELT MAGNET	88S-0032	1
31	POLY WASHER	88S-0033	2
32	MOTOR PCB "B"	88S-0034	1
33	3P FLAT WIRE	88S-0080	1
34	HINGE SPG PLATE	88S-0038	1
35	STOPPER	88S-0039	1
36	BUSHING STOPPER	88S-0040	1
37	SHAFT BASE HOLDER	88S-0041	1
38	SCREW T/T BH 2.6×6 ZN	88S-0042	14
39	SCREW TAPPING W/WASHER BH 2.6×8 ZN	88S-0043	1
40	SCREW T/T BH 2×4 ZN	88S-0044	4
41	SCREW TAPPING BH 3×10 BLK	88S-0045	3
42	SCREW MACHINE BH 2.6×3 ZN	88S-0046	2
43	SCREW TAPPING CPP 2605-FBBO	88S-0047	1
44	SCREW TAPPING PH 2×8 ZN	88S-0048	4
45	WASHER SPCC 1t× ϕ2.3× ϕ8 ZN	88S- 0049	4
46	SCREW TAPPING BH 2.6×10 BLK	88S-0050	2
47	SCREW T/T BH 2×6 ZN	88S-0051	1

EXPLODED VIEW/PARTS LIST

●OPTICAL PICK-UP CARRIAGE (MCD-350)

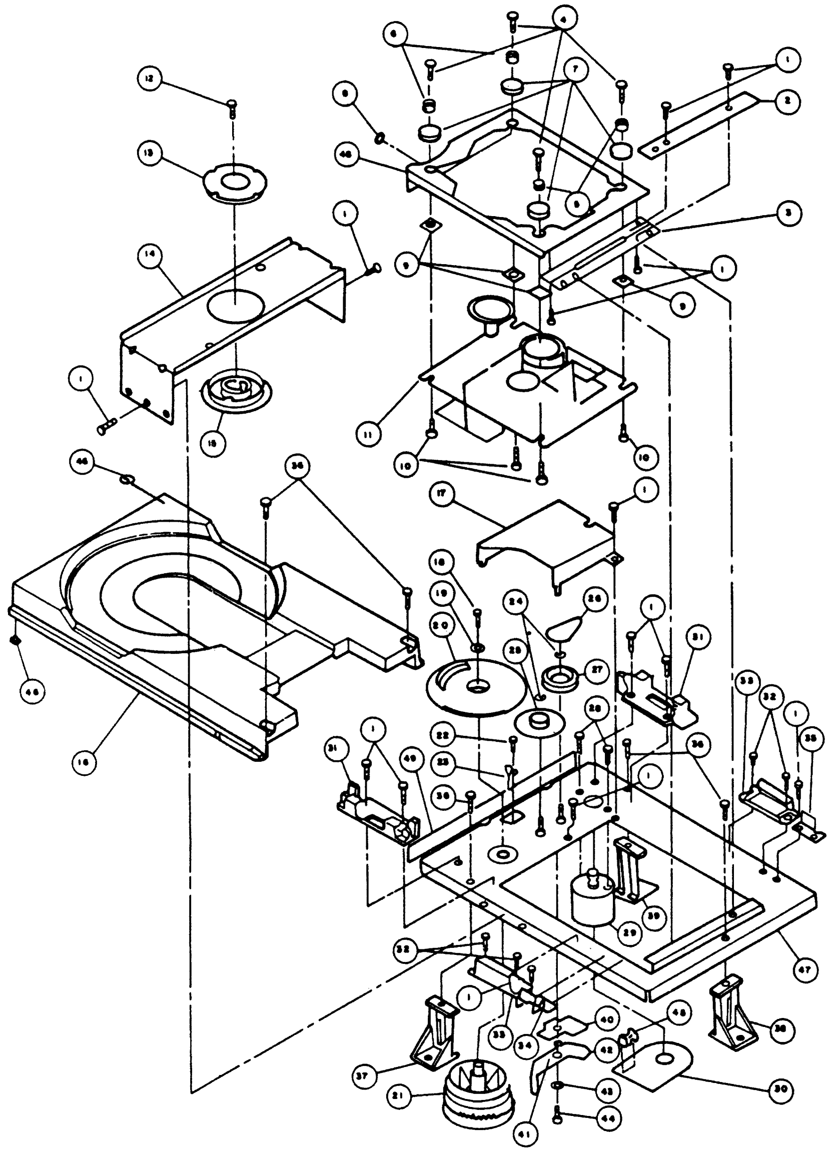


REF.NO.	DESCRIPTION	PART NO.	Q'TY
	MCD-350 ASS'Y	88S-0002	
1	BASE PU	88S-0052	1
2	PICK UP ASS'Y	88S-0053	1
3	MOTOR SLIDE	88S-0054	1
4	MOTOR SPINDLE	88S-0055	1
5	LEAF SWITCH	88S-0056	1
6	CONNECTOR	88S-0057	1
7	TURN TABLE CAP "A"	88S-0058	1
8	TURN TABLE	88S-0059	1
9	GUIDE PU	88S-0060	1
10	GEAR HOUSING	88S-0061	1
11	GEAR MOTOR	88S-0062	1

REF. NO.	DESCRIPTION	PART NO.	Q'TY
12	GEAR-B	88S-0063	1
13	GEAR-A	88S-0064	1
14	SHAFT PU	88S-0065	1
15	PU SHAFT HOLDER	88S-0066	2
16	SCREW TAP TITE CAMERA 2.6× 8 ZN	88S-0067	2
17	TURN TABLE SPRING	88S-0068	1
18	MOTOR PWB "A"	88S-0069	1
19	SCREW MACHINE 2×3 ZN	88S-0070	2
20	SCREW MACHINE BLK	89S-0071	2
21	SCREWMACHINE 2×4.2 BLK	88S-0072	2
22	SCREWMACHINE CAMERA 1.7×3 NI	88S-0073	2

EXPLODED VIEW/PARTS LIST

●OPTICAL PICK-UP CARRIAGE(KSL-210AFM)



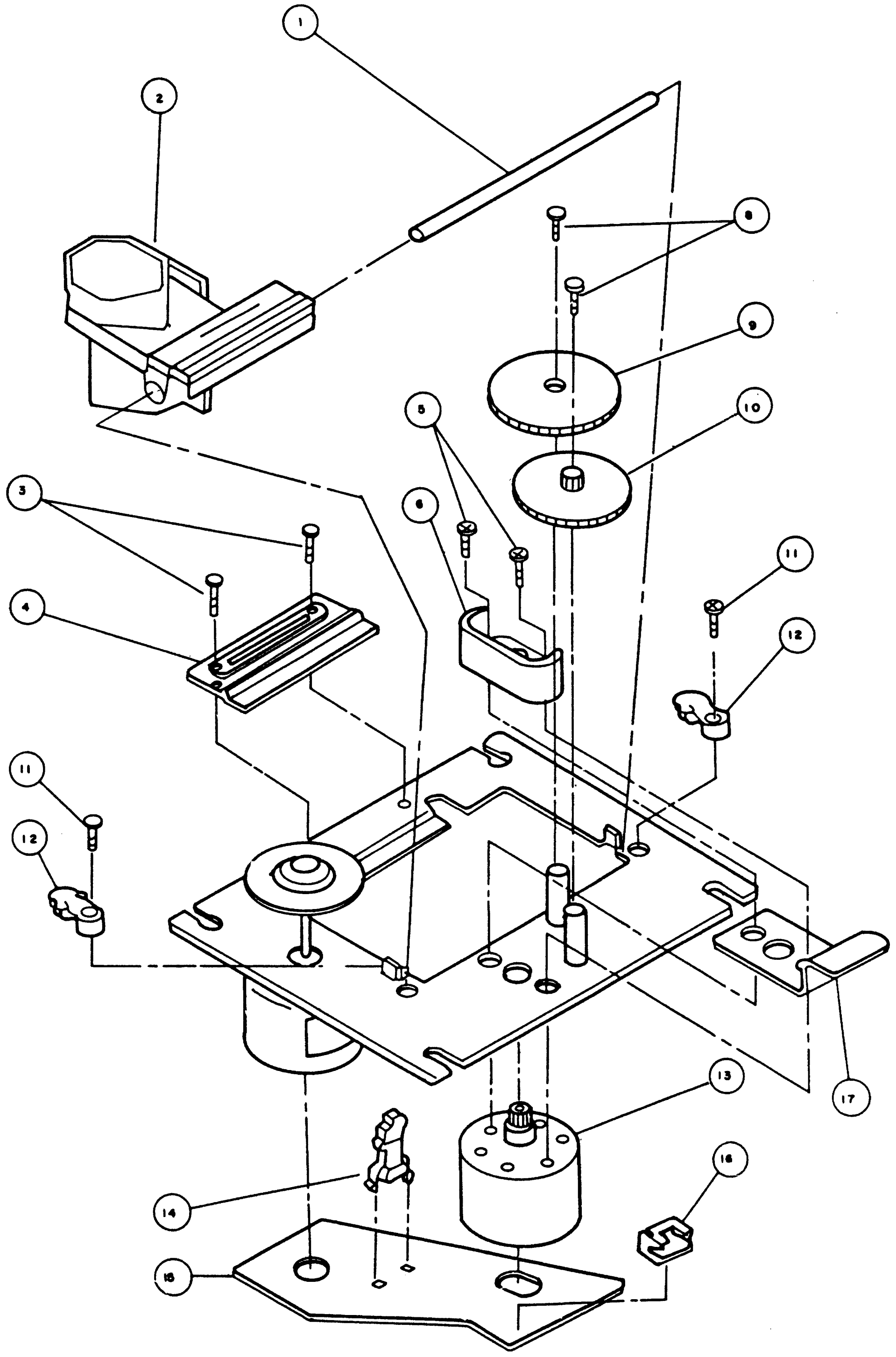
NOTE: Excluded parts in the parts list are not available as replacement parts.

REF. NO.	DESCRIPTION	PART NO.
	CDP Mechanism Assembly, KSL-210AFM	411-051A
2	Hinge Plate (SP)	256-265A
3	Hinge (SP)	395-030A
4	Roller (T) SP	422-030A
5	Spring (B)	442-110A
6	Spring (A)	442-111A
7	Cushion, Rubber (C)	447-025A
8	Roller (SP)	422-031A
9	Plate (T) SP	256-266A
10	Screw	353-010A
13	Magnet Assembly (SP)	524-010A
14	Chuck Chassis (SP)	313-110A
15	Chucking Pulley	432-061A
16	Tray (SP)	228-110A
17	Gear Cover (SP)	221-090A
19	Washer	354-030A
20	Drive Gear (SP)	435-080A
21	Control Cam (SP)	374-020A
23	Leaf Switch	558-060A
24	Washer	354-031A
25	Middle Gear (SP)	435-081A

REF. NO.	DESCRIPTION	PART NO.
26	LM Belt	451-045A
27	Loading Pulley	432-060A
28	Screw, 2.6 x 3	353-011A
29	Motor Assembly (RP)	414-040A
30	Motor PCB	511-515A
31	Tray, Holder (SP)	324-135A
33	Tray, Holder (SP)	324-136A
34	Tray, Guide (SP)	384-090A
35	Tray, Guide (SP)	384-091A
37	MD Fix Boss (SP)	381-020B
38	MD Fix Boss (SP)	381-021B
39	MD Fix Boss (SP)	381-022B
40	Ring Plate (SP)	256-267A
41	Boss	381-023A
42	Stopper Ring Assembly (SP)	345-020A
43	Spacer (SP)	445-030A
45	Connector 5P	563-070A
46	Damper	444-050A
47	Main Chassis Assembly (SP)	311-070A
48	Sub Chassis Assembly (SP)	311-071A
49	Front Tape	453-015A

EXPLODED VIEW/PARTS LIST

●OPTICAL PICK-UP CARRIAGE(KSL-210)



NOTE: Excluded parts in the parts list are not available as replacement parts

REF. NO.	DESCRIPTION	PART NO.
1	Pu Shaft	423-050A
2	Pick-Up, KSS-150A	411-070A
4	Slide, Holder	324-137A
5	Screw, P2 x 5	353-012A
6	Gear Cover	221-095A
8	Screw, 1.7 x 3	353-013A
9	Gear A	435-084A
10	Gear B	435-085A

REF. NO.	DESCRIPTION	PART NO.
11	Screw, 6 x 8	353-014A
12	Shaft Clamp	327-010A
13-1	SP Motor Assembly, X-2641-337-(1)	414-041A
13-2	SP Motor Assembly, X-2641-348-(1)	414-042A
14	Leaf Switch	558-061A
15	Motor PCB	511-517A
16	Connector 4P	563-071A
17	Stopper	322-010A

[REPLACEMENT PARTS LIST]　　　　P A G E : 1

MODEL : FFH-303L BG3　　SET PART NO : 112-303C　　RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
			1TBH0202018	BINDING HEAD TAPPING SCREW + 2	D 2.0 L 6.0 MSWR3/FZY	
			213-015A	CABINET	SIDE (L) (FFH-303)	
			213-016A	CABINET	SIDE (R) (FFH-303)	
			213-017A	CABINET	TOP (FFH-303)	
			226-320B	DOOR	CST-A (FFH-303A BG2)	
			226-321B	DOOR	CST-B (FFH-303A BG2)	
			226-322B	DOOR	CD (FFH-303A BG2)	
			236-386A	WINDOW	DIS PLAY (FFH-303 KW1)	
			236-432A	WINDOW	CST DOOR-L (FFH-303 KW1)	
			236-433A	WINDOW	CST DOOR-R (FFH-303 KW1)	
			246-083A	DECORATION	VOLUME (FFH-303 KW1)	
			246-084A	DECORATION	KNOB (FFH-303 KW1)	
			246-084B	DECORATION	KNOB-B (FFH-303)	
			255-009C	HEAT SINK	GSW-9300,GCD-60P)	
			255-031A	HEAT SINK	HEAT	
			255-561A	HEAT SINK		
			256-091C	PLATE	BACK (FFH-303L BG3)	
			256-092A	PLATE	BOTTOM (FFH-303)	
			265-013A	FOOT	RUBBER (FFH-303)	
			3140S-0006A	CHASSIS	MAIN (FFH-303)	
			3141SU0006A	CHASSIS ASSY	SUB ASSY MAIN (FFH-303)	
			316-901B	REMOCON ASSY	REMOCON ASSY(G/S)3BAND,MITSUM	
			324-288A	HOLDER	DECK (FFH-303)	
			324-305A	HOLDER	CST-A (FFH-303)	
			324-306A	HOLDER	CST-B (F-303)	
			324-308A	HOLDER	EJECT-L (FFH-303)	
			324-309A	HOLDER	EJECT-R (F-303)	
			324-672A	HOLDER	DAMPER (FK-672)	
			353-052A	SCREW	* TAPPING.WASHER 3X10 CU-COAT	
			3720S-0003C	PANEL	FRONT (FFH-303L BG3)	
			384-008A	GUIDE	EJECT (L) (FFH-303 KW1)	
			384-009A	GUIDE	EJECT (R) (FFH-303 KW1)	
			384-012A	GUIDE	ASSY EJECT-L	
			384-013A	GUIDE	ASSY EJECT-R	
			3875S-5303C	MANUAL, OPERATION ASSY	(FFH-303L BG3)	
			3890S-C001C	BOX	(FFH-303L BG3)	
			410-050E	DECK SUB ASSY	MCD-350GA SUB A'SSY SEBANG	
			411-050E	MECHANISM ASSY	MCD-350GA SEBANG 149X152.5	
			419-005H	DECK MECHANISM	CWA407-RR PB/REC ONE BODYF303	
			442-307A	SPRING	EJECT-L (FFH-303)	
			442-307B	SPRING	EJECT-R (F-303)	
			442-750D	SPRING	FOR CST DOOR EJECT(F-TYPE) (S)	
			444-111A	DAMPER	DAMPER AY (M=10.4/T=13)	
			463-022A	LENS	REMOTE (FFH-303)	
			4810S-0084A	BRACKET	PCB (FFH-303 KW1)	
			4940S-0140A	KNOB	CD PLAY (FFH-303 KW1)	
			4940S-0141B	KNOB	CD FUNCTION (FFH-303A BG2)	
			4940S-0142A	KNOB	TUNER (FFH-303 KW1)	
			4940S-0143A	KNOB	PRESET (FFH-303 KW1)	
			4940S-0144A	KNOB	TUNING (FFH-303 KW1)	

[REPLACEMENT PARTS LIST] PAGE : 2

MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
			4940S-0145A	KNOB	AMP FUNCTION (FFH-303 KW1)	
			4940S-0146A	KNOB	POWER (FFH-303 KW1)	
			4940S-0147B	KNOB	PLAY-A (FFH-303A BG2)	
			4940S-0148B	KNOB	PLAY-B (FFH-303A BG2)	
			4940S-0149A	KNOB	DECK (L)(FFH-303 KW1)	
			4940S-0150A	KNOB	DECK (R)(FFH-303 KW1)	
			4940S-0151A	KNOB	SLIDE (FFH-303 KW1)	
			4940S-0152A	KNOB	VOLUME (FFH-303 KW1)	
			561-647D	CONNECTOR	F-WIRE HOLDER MX51052-0400 (S)	
			561-647E	CONNECTOR	F-WIRE HOLDER MX51052-0500 (S)	
			561-647E	CONNECTOR	F-WIRE HOLDER MX51052-0500 (S)	
			561-647F	CONNECTOR	F-WIRE HOLDER MX51052-0600 (S)	
			561-647G	CONNECTOR	F-WIRE HOLDER MX51052-0700 (S)	
			561-647H	CONNECTOR	F-WIRE HOLDER MX51052-0800 (S)	
			563-655A	CONNECTOR ASSY	COAX, 300MM	
			563-706A	CONNECTOR ASSY	JST PHR-08RD/IL-S08RD 180	
			563-801F	CONNECTOR ASSY	GSIL-S04X2 1571 #28 180	
			563-801G	CONNECTOR ASSY	GSIL-S05X2 1571 #28 240	
			563-801J	CONNECTOR ASSY	PHR-08/IL-S08 1571 #28 180	
			563-935H	CONNECTOR ASSY	C,AY GS IL-G03X2 (I) 340	
			563-935I	CONNECTOR ASSY	C,AY GS IL-G08/06 (I,G) 240	
			577-009A	SOCKET	HSC0528-01-020 VDE J-HOSIDEN	
			586-001C	FUSE HOLDER	PIN-T 5X20 KS (S)	
			632-218B	COIL ANTENNA	COIL ANT LOOP SOCKET TYPE (S)	
			659-250E	DISPLAY	12MT-57GK,DIGITRON, FUTABA	
			681-035L	CORD POWER	KKJ1004A+KJ0201+KKJ201A,2.5A	
			6871S-12MAD	PWB ASSY	FFH-303L MAIN(AMP/VR/TUR/LED)	
			6871S-12NAC	PWB ASSY	FFH-303L DECK/CD	
			6871S-12QAC	PWB ASSY	FFH-303L FRONT	
			6871S-12RAD	PWB ASSY	FFH-303L FTZ POWER	
			6871SA12MAD	PWB ASSY	FFH-303L TUNER	
			6871SA12NAC	PWB ASSY	FFH-303L DECK	
			6871SA12QAC	PWB ASSY	FFH-303L FRONT	
			6871SB12MAD	PWB ASSY	FFH-303L AMP	
			6871SB12NAA	PWB ASSY	FFH-303 CD MAIN ASS'Y	
			6871SB12QAC	PWB ASSY	FFH-303L EQ,H/P	
			6871SC12MAB	PWB ASSY	FFH-303L VR	
			6871SC12QAA	PWB ASSY	FFH-303 DECK KEY	
			6871SD12MAA	PWB ASSY	FFH-303 VR LED	
			6871SD12QAB	PWB ASSY	FFH-303A V/SELCTOR	
			99P-3010		A'Y PINCH ARM L 22-093-4149	
			99P-3012		AY PINCH ARM R 22-093-4150	
			99P-3023		A'Y PULLEY FR 22-093-3060	
			99P-3024		BELT FR 02-083-4059	
			99P-3040		HALL IC 00-DN6851A	
			99P-3044		WIRE 16-072-4056	
			99P-3074	DECK PARTS	A'Y MOTOR 22-093-4193	
			99P-3076	DECK PARTS	A'Y HOLDER HEAD 22-093-4067	
			99P-3077	DECK PARTS	SOLENOID 07-W021C	
			99P-3079	DECK PARTS	BELT MAIN 02-083-4073	

「REPLACEMENT PARTS LIST」 P.A G E : 3

MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
			99P-3083	DECK PARTS	MAIN BELT 02-083-4072	
			99P-3084	DECK PARTS	A'Y HOLDER HEAD 22-093-4270	
		CF701	616-010B	FILTER CERAMIC	SFE10.7MS3GH(RD) 180K (S)	
		CF702	616-010B	FILTER CERAMIC	SFE10.7MS3GH(RD) 180K (S)	
		CF703	616-010B	FILTER CERAMIC	SFE10.7MS3GH(RD) 180K (S)	
		CF704	616-020L	FILTER CERAMIC	RESO NATOR,CSB456F15	
		CF705	616-028D	FILTER CERAMIC	AHCFM2-A450BL AM	
		CN101	561-801L	CONNECTOR	HOUSING,B TO BIL-SDA-12S-S3L2	
		CN102	561-801L	CONNECTOR	HOUSING,B TO BIL-SDA-12S-S3L2	
		CN108	561-801L	CONNECTOR	HOUSING,B TO BIL-SDA-12S-S3L2	
		C101	0CC2210K405	CAPACITOR CERAMIC(TEMP COMP)	220P 50V J SL TP	
		C101	0CC2710K415	CAPACITOR CERAMIC(TEMP COMP)	270P 50V J NPO TP	
		C102	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C103	0CK1020K515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 50V 10 B TS	
		C104	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C105	0CQ5621N409	CAPACITOR POLYESTER(MYLAR)	0.0056U 100V J POLY TP	
		C106	0CQ1231N409	CAPACITOR POLYESTER(MYLAR)	0.012U 100V J POLY TP	
		C106	0CQ1521N409	CAPACITOR POLYESTER(MYLAR)	0.0015U 100V J POLY TP	
		C107	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C107	0CE2266F618	CAPACITOR,ELECTROLYTIC	22M SMS 16V M FM5 TP(5)	
		C108	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C108	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C109	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C110	0CC2210K405	CAPACITOR CERAMIC(TEMP COMP)	220P 50V J SL TP	
		C110	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C113	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C113	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C114	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C114	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C115	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C116	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C117	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C118	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C119	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C120	0CQ6831N409	CAPACITOR POLYESTER(MYLAR)	0.068U 100V J POLY TP	
		C121	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C122	0CC6800K415	CAPACITOR CERAMIC(TEMP COMP)	68P 50V J NPO TP	
		C122	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C123	0CQ1021N409	CAPACITOR POLYESTER(MYLAR)	0.001U 100V J POLY TP	
		C124	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C125	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C126	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C126	0CE6846K618	CAPACITOR,ELECTROLYTIC	0.68M SMS 50V M FL TP(5)	
		C127	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C128	0CQ5631N409	CAPACITOR POLYESTER(MYLAR)	0.056U 100V J POLY TP	
		C129	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C130	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C130	0CE2246K618	CAPACITOR,ELECTROLYTIC	0.22M SMS 50V M FM5 TP(5)	
		C131	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C131	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	

[REPLACEMENT PARTS LIST]

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C132	0CC3910K505	CAPACITOR CERAMIC(TEMP COMP)	390P 50V K SL TP	
		C132	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C133	0CE4746K618	CAPACITOR,ELECTROLYTIC	0.47M SMS 50V M FL TP(5)	
		C134	0CC3310K405	CAPACITOR CERAMIC(TEMP COMP)	330P 50V J SL TS	
		C135	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C135	0CE2266F618	CAPACITOR,ELECTROLYTIC	22M SMS 16V M FM5 TP(5)	
		C136	0CC5600K415	CAPACITOR CERAMIC(TEMP COMP)	56P 50V J NPO TP	
		C142	0CQ1041N409	CAPACITOR POLYESTER(MYLAR)	0.1U 100V J POLY TP	
		C144	0CE4776F630	CAPACITOR,ELECTROLYTIC	470UF SMS 16V M FM5 BULK	
		C145	0CE4776F630	CAPACITOR,ELECTROLYTIC	470UF SMS 16V M FM5 BULK	
		C146	0CE4786H640	CAPACITOR,ELECTROLYTIC	4700M SMS 25V M FM10	
		C147	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C148	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C157	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C158	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C159	0CE3346K618	CAPACITOR,ELECTROLYTIC	0.33M SMS 50V M FL TP(5)	
		C160	0CE1046K618	CAPACITOR,ELECTROLYTIC	0.1M SMS 50V M FL TP(5)	
		C161	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C161	0CQ3331N409	CAPACITOR POLYESTER(MYLAR)	0.033U 100V J POLY TP	
		C162	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C163	0CQ8231N409	CAPACITOR POLYESTER(MYLAR)	0.082U 100V J POLY TP	
		C164	0CQ2231N409	CAPACITOR POLYESTER(MYLAR)	0.022U 100V J POLY TP	
		C165	0CQ8221N409	CAPACITOR POLYESTER(MYLAR)	0.0082U 100V J POLY TP	
		C166	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C166	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C167	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C167	0CN8210K518	CAPACITOR TUBULA(HIGH DIELE)	820P 50V K B TA26	
		C168	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C168	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C169	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C169	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C170	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C171	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C172	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C173	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C174	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C175	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C176	0CE3376F618	CAPACITOR,ELECTROLYTIC	330M SMS 16V M FM5 TP5	
		C177	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C182	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C183	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C185	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C186	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C187	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C188	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C189	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C201	0CC2210K405	CAPACITOR CERAMIC(TEMP COMP)	220P 50V J SL TP	
		C201	0CC2710K415	CAPACITOR CERAMIC(TEMP COMP)	270P 50V J NPO TP	
		C202	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C203	0CK1020K515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 50V 10 B TS	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C204	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C205	0CQ5621N409	CAPACITOR POLYESTER(MYLAR)	0.0056U 100V J POLY TP	
		C206	0CQ1231N409	CAPACITOR POLYESTER(MYLAR)	0.012U 100V J POLY TP	
		C206	0CQ1521N409	CAPACITOR POLYESTER(MYLAR)	0.0015U 100V J POLY TP	
		C207	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C207	0CE2266F618	CAPACITOR,ELECTROLYTIC	22M SMS 16V M FM5 TP(5)	
		C208	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C208	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C209	0CE1076D618	CAPACITOR,ELECTROLYTIC	100M SMS 10V M FM5 TP(5)	
		C209	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C210	0CC2210K405	CAPACITOR CERAMIC(TEMP COMP)	220P 50V J SL TP	
		C210	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C211	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C212	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C213	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C214	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C215	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C216	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C217	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C218	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C218	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C219	0CE2246K618	CAPACITOR,ELECTROLYTIC	0.22M SMS 50V M FM5 TP(5)	
		C219	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C220	0CE4746K618	CAPACITOR,ELECTROLYTIC	0.47M SMS 50V M FL TP(5)	
		C220	0CQ1521N409	CAPACITOR POLYESTER(MYLAR)	0.0015U 100V J POLY TP	
		C221	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C222	0CC6800K415	CAPACITOR CERAMIC(TEMP COMP)	68P 50V J NPO TP	
		C223	0CQ1021N409	CAPACITOR POLYESTER(MYLAR)	0.001U 100V J POLY TP	
		C224	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C225	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C225	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C226	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C226	0CE6846K618	CAPACITOR,ELECTROLYTIC	0.68M SMS 50V M FL TP(5)	
		C227	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C227	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C228	0CE2266F618	CAPACITOR,ELECTROLYTIC	22M SMS 16V M FM5 TP(5)	
		C228	0CQ5631N409	CAPACITOR POLYESTER(MYLAR)	0.056U 100V J POLY TP	
		C229	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C230	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C230	0CE2246K618	CAPACITOR,ELECTROLYTIC	0.22M SMS 50V M FM5 TP(5)	
		C231	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C231	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C232	0CC3910K505	CAPACITOR CERAMIC(TEMP COMP)	390P 50V K SL TP	
		C232	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C233	0CE4746K618	CAPACITOR,ELECTROLYTIC	0.47M SMS 50V M FL TP(5)	
		C234	0CC3310K405	CAPACITOR CERAMIC(TEMP COMP)	330P 50V J SL TS	
		C235	0CE2266F618	CAPACITOR,ELECTROLYTIC	22M SMS 16V M FM5 TP(5)	
		C236	0CC5600K415	CAPACITOR CERAMIC(TEMP COMP)	56P 50V J NPO TP	
		C242	0CQ1041N409	CAPACITOR POLYESTER(MYLAR)	0.1U 100V J POLY TP	
		C244	0CE4776F630	CAPACITOR,ELECTROLYTIC	470UF SMS 16V M FM5 BULK	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C245	0CE4776F630	CAPACITOR,ELECTROLYTIC	470UF SMS 16V M FM5 BULK	
		C246	0CE4786H640	CAPACITOR,ELECTROLYTIC	4700M SMS 25V M FM10	
		C247	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C248	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C250	0CK1020K515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 50V 10 B TS	
		C251	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C257	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C258	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C259	0CE3346K618	CAPACITOR,ELECTROLYTIC	0.33M SMS 50V M FL TP(5)	
		C260	0CE1046K618	CAPACITOR,ELECTROLYTIC	0.1M SMS 50V M FL TP(5)	
		C261	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C261	0CQ3331N409	CAPACITOR POLYESTER(MYLAR)	0.033U 100V J POLY TP	
		C262	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C263	0CQ8231N409	CAPACITOR POLYESTER(MYLAR)	0.082U 100V J POLY TP	
		C264	0CQ2231N409	CAPACITOR POLYESTER(MYLAR)	0.022U 100V J POLY TP	
		C265	0CQ8221N409	CAPACITOR POLYESTER(MYLAR)	0.0082U 100V J POLY TP	
		C266	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C266	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C267	0CN8210K518	CAPACITOR TUBULA(HIGH DIELE)	820P 50V K B TA26	
		C268	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C268	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C269	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C269	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C270	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C271	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C272	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C273	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C282	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C283	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C285	0CN1510K518	CAPACITOR TUBULA(HIGH DIELE)	150P 50V K B TA26	
		C286	0CN3310K518	CAPACITOR TUBULA(HIGH DIELE)	330P 50V K B TA26	
		C302	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C304	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C309	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C311	0CE3366F618	CAPACITOR,ELECTROLYTIC	33M SMS 16V M FL TP(5)	
		C312	0CQ1231N409	CAPACITOR POLYESTER(MYLAR)	0.012U 100V J POLY TP	
		C313	0CQ1231N409	CAPACITOR POLYESTER(MYLAR)	0.012U 100V J POLY TP	
		C314	0CQ2231N409	CAPACITOR POLYESTER(MYLAR)	0.022U 100V J POLY TP	
		C315	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C316	0CQ1221R449	CAPACITOR POLYESTER(MYLAR)	1200P 250V J PYLN TP	
		C321	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C323	0CC1510K515	CAPACITOR,CERAMIC(TEMP COMP)	150P 50V K NPO TS	
		C324	0CC1010K505	CAPACITOR,CERAMIC(TEMP COMP)	100P 50V K SL TS	
		C325	0CC2010K405	CAPACITOR CERAMIC(TEMP COMP)	200P 50V J SL TS	
		C327	0CC2710K415	CAPACITOR CERAMIC(TEMP COMP)	270P 50V J NPO TP	
		C328	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C329	0CE3366F618	CAPACITOR,ELECTROLYTIC	33M SMS 16V M FL TP(5)	
		C330	0CQ1831N409	CAPACITOR POLYESTER(MYLAR)	0.018U 100V J POLY TP	
		C401	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C402	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C404	0CE3376F618	CAPACITOR,ELECTROLYTIC	330M SMS 16V M FM5 TP5	
		C405	0CC8210K505	CAPACITOR CERAMIC(TEMP COMP)	820P 50V K SL TS	
		C406	0CC8210K505	CAPACITOR CERAMIC(TEMP COMP)	820P 50V K SL TS	
		C407	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C408	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C409	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C421	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C423	0CC1510K515	CAPACITOR,CERAMIC(TEMP COMP)	150P 50V K NPO TS	
		C424	0CC1010K505	CAPACITOR,CERAMIC(TEMP COMP)	100P 50V K SL TS	
		C425	0CC2010K405	CAPACITOR CERAMIC(TEMP COMP)	200P 50V J SL TS	
		C427	0CC2710K415	CAPACITOR CERAMIC(TEMP COMP)	270P 50V J NPO TP	
		C430	0CX4700K408	CAPACITOR TUBULA(T.C)	47P 50V J SL TA26	
		C431	0CX4700K408	CAPACITOR TUBULA(T.C)	47P 50V J SL TA26	
		C433	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C435	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C436	0CE2276D618	CAPACITOR,ELECTROLYTIC	220M SMS 10V M FM5 TP(5)	
		C437	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C438	0CC3300K415	CAPACITOR CERAMIC(TEMP COMP)	33P 50V J NPO TP	
		C439	0CC3900K415	CAPACITOR CERAMIC(TEMP COMP)	39P 50V J NPO TP	
		C440	624-034D	CAPACITOR ELECTROLYTIC DOIB	GOLD,EECF5R5U104 0.1F/5.5V	
		C441	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C442	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C443	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C451	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C452	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C453	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C454	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C455	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C456	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C457	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C458	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C459	0CE4776D618	CAPACITOR,ELECTROLYTIC	470M SMS 10V M FL TP(5)	
		C500	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C601	0CC4700K415	CAPACITOR CERAMIC(TEMP COMP)	47P 50V J NPO TP	
		C602	0CC4700K415	CAPACITOR CERAMIC(TEMP COMP)	47P 50V J NPO TP	
		C603	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C604	0CE1046K618	CAPACITOR,ELECTROLYTIC	0.1M SMS 50V M FL TP(5)	
		C605	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C606	0CC3300K415	CAPACITOR CERAMIC(TEMP COMP)	33P 50V J NPO TP	
		C607	0CC3300K415	CAPACITOR CERAMIC(TEMP COMP)	33P 50V J NPO TP	
		C609	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C610	0CE3366F618	CAPACITOR,ELECTROLYTIC	33M SMS 16V M FL TP(5)	
		C612	0CE1076D618	CAPACITOR,ELECTROLYTIC	100M SMS 10V M FM5 TP(5)	
		C613	0CE1076D618	CAPACITOR,ELECTROLYTIC	100M SMS 10V M FM5 TP(5)	
		C630	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C650	0CE1066K618	CAPACITOR,ELECTROLYTIC	10M SMS 50V M FM5 TP(5)	
		C654	0CE4776F630	CAPACITOR,ELECTROLYTIC	470UF SMS 16V M FM5 BULK	
		C701	0CE1076J618	CAPACITOR,ELECTROLYTIC	100UF SMS 35V M FM(5) TP(5)	
		C701	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C702	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C

RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C702	0CK1020K515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 50V 10 B TS	
		C703	0CC5600K415	CAPACITOR CERAMIC(TEMP COMP)	56P 50V J NPO TP	
		C703	0CE1076K618	CAPACITOR,ELECTROLYTIC	100UF SMS 50V M FL TP5	
		C704	0CE4766H618	CAPACITOR,ELECTROLYTIC	47M SMS 25V M FL TP(5)	
		C704	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C705	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C705	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C706	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C706	0CK1020K515	CAPACITOR,CERAMIC(HIGH DIELE)	1000P 50V 10 B TS	
		C707	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C707	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C708	0CC5600K415	CAPACITOR CERAMIC(TEMP COMP)	56P 50V J NPO TP	
		C708	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C709	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C709	0CY1610K499	CAPACITOR,POLYESTYROL	160PF 50V J PSR-HT TP	
		C710	0CE4776H630	CAPACITOR,ELECTROLYTIC	470M SMS 25V M FM5	
		C710	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C711	0CE1086F630	CAPACITOR,ELECTROLYTIC	1000M SMS 16V M FM5	
		C712	0CE1086F630	CAPACITOR,ELECTROLYTIC	1000M SMS 16V M FM5	
		C712	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C713	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C713	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C714	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C714	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C715	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C715	0CX4R70K518	CAPACITOR TUBULA(T.C)	4.7P 50V K NPO TA26	
		C716	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C716	0CQ3911N449	CAPACITOR POLYESTER(MYLAR)	390P 100V J PYLN TP	
		C717	0CE3366F618	CAPACITOR,ELECTROLYTIC	33M SMS 16V M FL TP(5)	
		C720	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C721	0CE4766F618	CAPACITOR,ELECTROLYTIC	47M SMS 16V M FL TP(5)	
		C722	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C723	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C724	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C725	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C726	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C727	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C728	0CK1030K515	CAPACITOR,CERAMIC(HIGH DIELE)	0.01M 50V K B TS	
		C736	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C736	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C737	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C738	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C739	0CQ1521N409	CAPACITOR POLYESTER(MYLAR)	0.0015U 100V J POLY. TP	
		C740	0CQ2231N409	CAPACITOR POLYESTER(MYLAR)	0.022U 100V J POLY TP	
		C741	0CC3310K405	CAPACITOR CERAMIC(TEMP COMP)	330P 50V J SL TS	
		C742	0CC8200K415	CAPACITOR CERAMIC(TEMP COMP)	82P 50V J NPO TP	
		C743	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C744	0CC8200K415	CAPACITOR CERAMIC(TEMP COMP)	82P 50V J NPO TP	
		C745	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C746	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C747	0CE2246K618	CAPACITOR,ELECTROLYTIC	0.22M SMS 50V M FM5 TP(5)	
		C748	0CQ1831N409	CAPACITOR POLYESTER(MYLAR)	0.018U 100V J POLY TP	
		C749	0CQ1831N409	CAPACITOR POLYESTER(MYLAR)	0.018U 100V J POLY TP	
		C750	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C751	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C753	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C754	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C755	0CE2276D618	CAPACITOR,ELECTROLYTIC	220M SMS 10V M FM5 TP(5)	
		C756	0CE1046K618	CAPACITOR,ELECTROLYTIC	0.1M SMS 50V M FL TP(5)	
		C757	0CK2230K945	CAPACITOR CERAMIC(HIGH DIELE)	0.022M 50V Z F TS	
		C760	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C771	0CC3900K415	CAPACITOR CERAMIC(TEMP COMP)	39P 50V J NPO TP	
		C772	0CC3900K415	CAPACITOR CERAMIC(TEMP COMP)	39P 50V J NPO TP	
		C774	0CC1010K505	CAPACITOR,CERAMIC(TEMP COMP)	100P 50V K SL TS	
		C775	0CC3900K415	CAPACITOR CERAMIC(TEMP COMP)	39P 50V J NPO TP	
		C776	0CC3900K415	CAPACITOR CERAMIC(TEMP COMP)	39P 50V J NPO TP	
		C780	0CE1076H618	CAPACITOR,ELECTROLYTIC	100M SMS 25V M FM5 TP(5)	
		C781	0CE1076H618	CAPACITOR,ELECTROLYTIC	100M SMS 25V M FM5 TP(5)	
		C782	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C783	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C785	0CK4730K940	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F S	
		C787	0CK4730K945	CAPACITOR CERAMIC(HIGH DIELE)	0.047U 50V Z F TS	
		C788	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C789	0CC3310K405	CAPACITOR CERAMIC(TEMP COMP)	330P 50V J SL TS	
		C790	0CE2276F618	CAPACITOR,ELECTROLYTIC	220M SMS 16V M FM5 TP(5)	
		C791	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C801	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C802	0CX8R20K478	CAPACITOR TUBULA(T.C)	8.2P 50V J N750 TA26	
		C803	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C804	0CQ3331N409	CAPACITOR POLYESTER(MYLAR)	0.033U 100V J POLY TP	
		C805	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C806	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C807	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C808	0CE4746K618	CAPACITOR,ELECTROLYTIC	0.47M SMS 50V M FL TP(5)	
		C809	0CQ1031N409	CAPACITOR POLYESTER(MYLAR)	0.01U 100V J POLY TP	
		C810	0CQ6821N409	CAPACITOR POLYESTER(MYLAR)	0.0068U 100V J POLY TP	
		C811	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C812	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C813	0CQ1041N409	CAPACITOR POLYESTER(MYLAR)	0.1U 100V J POLY TP	
		C814	0CQ3331N409	CAPACITOR POLYESTER(MYLAR)	0.033U 100V J POLY TP	
		C815	0CE3356K618	CAPACITOR,ELECTROLYTIC	3.3M SMS 50V M FL TP(5)	
		C816	0CQ1041N409	CAPACITOR POLYESTER(MYLAR)	0.1U 100V J POLY TP	
		C817	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C818	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C819	0CK1030K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.01UF 50V Z F TS	
		C820	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C821	0CN1010K518	CAPACITOR TUBULA(HIGH DIELE)	100P 50V K B TA26	
		C822	0CQ4721N409	CAPACITOR POLYESTER(MYLAR)	0.0047U 100V J POLY TP	
		C823	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C824	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C825	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C826	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C827	672-002C	LEAD SET	TIN WIRE D=0.5 26M/M TAPPING	
		C828	672-002C	LEAD SET	TIN WIRE D=0.5 26M/M TAPPING	
		C830	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C831	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C832	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C833	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C834	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C835	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C836	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C837	0CQ1242N409	CAPACITOR POLYESTER(MYLAR)	0.12UU S 100V J POLY TP	
		C838	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C839	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C840	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C841	0CQ1041N409	CAPACITOR POLYESTER(MYLAR)	0.1U 100V J POLY TP	
		C851	0CE4746K618	CAPACITOR,ELECTROLYTIC	0.47M SMS 50V M FL TP(5)	
		C852	0CQ3331N409	CAPACITOR POLYESTER(MYLAR)	0.033U 100V J POLY TP	
		C853	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C854	0CE1056K618	CAPACITOR,ELECTROLYTIC	1.0M SMS 50V M FL TP(5)	
		C855	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C856	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C856	672-002C	LEAD SET	TIN WIRE D=0.5 26M/M TAPPING	
		C857	0CC3000K415	CAPACITOR CERAMIC(TEMP COMP)	30P 50V J NPO TP	
		C857	672-002C	LEAD SET	TIN WIRE D=0.5 26M/M TAPPING	
		C858	0CC3000K415	CAPACITOR CERAMIC(TEMP COMP)	30P 50V J NPO TP	
		C859	0CE2266D618	CAPACITOR,ELECTROLYTIC	22M SMS 10V M FM5 TP(5)	
		C860	0CE4756K618	CAPACITOR,ELECTROLYTIC	4.7M SMS 50V M FL TP(5)	
		C870	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C871	0CN2230F948	CAPACITOR TUBULA(HIGH DIELE)	0.022M 16V Z F TA26	
		C872	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C873	0CE2256K618	CAPACITOR,ELECTROLYTIC	2.2M SMS 50V M FL TP(5)	
		C873	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		C874	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C874	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		C875	0CQ2221N409	CAPACITOR POLYESTER(MYLAR)	0.0022U 100V J POLY TP	
		C876	0CQ1021N409	CAPACITOR POLYESTER(MYLAR)	0.001U 100V J POLY TP	
		C877	0CQ1021N409	CAPACITOR POLYESTER(MYLAR)	0.001U 100V J POLY TP	
		C879	0CX2000K408	CAPACITOR TUBULA(T.C)	20P 50V J SL TA26	
		C880	0CX2000K408	CAPACITOR TUBULA(T.C)	20P 50V J SL TA26	
		C881	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C882	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		C883	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C884	0CE1076F618	CAPACITOR,ELECTROLYTIC	100M SMS 16V M FM5 TP(5)	
		C885	0CQ8231N409	CAPACITOR POLYESTER(MYLAR)	0.082U 100V J POLY TP	
		C886	0CQ8231N409	CAPACITOR POLYESTER(MYLAR)	0.082U 100V J POLY TP	
		C887	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C888	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C889	0CQ4721N409	CAPACITOR POLYESTER(MYLAR)	0.0047U 100V J POLY TP	
		C890	0CQ4721N409	CAPACITOR POLYESTER(MYLAR)	0.0047U 100V J POLY TP	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		C891	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C892	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C893	0CE3376F618	CAPACITOR,ELECTROLYTIC	330M SMS 16V M FM5 TP5	
		C894	0CE3376F618	CAPACITOR,ELECTROLYTIC	330M SMS 16V M FM5 TP5	
		C895	0CN1020K518	CAPACITOR TUBULA(HIGH DIELE)	1000P 50V K B TA26	
		C896	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C897	0CE4766D618	CAPACITOR,ELECTROLYTIC	47M SMS 10V M FL TP(5)	
		C898	0CK1040K945	CAPACITOR,CERAMIC(HIGH DIELEC)	0.1UF 50V Z F TS	
		C901	0CE1066F618	CAPACITOR,ELECTROLYTIC	10M SMS 16V M FM5 TP(5)	
		D101	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D102	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D103	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D104	0DD540200CA	DIODE	1N5402,RECT,SILTER,FORMING	
		D105	0DD540200CA	DIODE	1N5402,RECT,SILTER,FORMING	
		D106	0DD540200CA	DIODE	1N5402,RECT,SILTER,FORMING	
		D107	0DD540200CA	DIODE	1N5402,RECT,SILTER,FORMING	
		D108	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D109	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D110	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D111	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D112	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D113	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D301	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D302	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D303	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D304	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D305	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D307	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D308	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D309	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D310	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D311	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D312	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D313	0DD414809GA	DIODE	1N4148 S/W KEC	
		D314	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D315	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D401	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D402	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D403	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D404	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D406	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D407	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D408	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D409	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D410	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D411	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D412	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D413	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D414	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D416	0DD132009AA	DIODE	1SS132 DETECT,SW TP	

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MODEL : FFH-303L BG3

SET PART NO : 112-303C

RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		D492	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D493	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D601	0DD400209EA	DIODE	1N4002,T/B,A-405/26MM MIC	
		D602	0DD400209EA	DIODE	1N4002,T/B,A-405/26MM MIC	
		D603	0DD400209EA	DIODE	1N4002,T/B,A-405/26MM MIC	
		D606	0DD414809GA	DIODE	1N4148 S/W KEC	
		D701	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D701	0DD400209BA	DIODE	ROIN4002T1A,RECTRON,TP	
		D702	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D702	0DD400209BA	DIODE	ROIN4002T1A.RECTRON,TP	
		D703	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D703	0DD400209BA	DIODE	ROIN4002T1A,RECTRON,TP	
		D704	0DD151000FA	DIODE	PBM151,BRID,SILITER,FORMING	
		D704	0DD414809GA	DIODE	1N4148 S/W KEC	
		D705	0DD400209BA	DIODE	ROIN4002T1A,RECTRON,TP	
		D801	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D802	0DD132009AA	DIODE	1SS132 DETECT,SW TP	
		D803	0DD414809GA	DIODE	1N4148 S/W KEC	
		D804	0DD414809GA	DIODE	1N4148 S/W KEC	
		F701	0FT6300B513	FUSE TIME LAG	0.63A 250V 5.2X20 G SMK	
		IC101	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC101	0ISA324600A	IC, SANYO	LA3246 PRE AMP P/B SANYO (S)	
		IC102	0IRH335000A	IC, ROHM	,BA335 APSS ROHM	
		IC102	0ISA782100A	IC, SANYO	LC7821 ANALO S/W2C*8P SANYO(S)	
		IC103	0IHI121360C	IC,HITACHI	HA12136A DOLBY-B DILP-16,HITA	
		IC103	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC104	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC105	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC106	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC107	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC108	0ISA496600A	IC, SANYO	LC4966 ANALOG S/W SANYO	
		IC109	0ISG205000A	IC, SGS-THOMSON	TDA2050V + ACCESSORY SGS	
		IC110	0ISG205000A	IC, SGS-THOMSON	TDA2050V + ACCESSORY SGS	
		IC111	0IGS781200C	IC, GOLDSTAR ELECTRON	GL7812 12V 1A REGULATOR,G/S	
		IC112	0INS791200A	IC, NATIONAL SEMICONDUCTOR	LM7912CT VOL-REGU N/S	
		IC113	0IGS781200C	IC, GOLDSTAR ELECTRON	GL7812 12V 1A REGULATOR,G/S	
		IC114	0INS791200A	IC, NATIONAL SEMICONDUCTOR	LM7912CT VOL-REGU N/S	
		IC117	0IMI522700A	IC, MITSUBISHI	M5227P GR EQ 5X1 MITS (S)	
		IC118	0IMI522700A	IC, MITSUBISHI	M5227P GR EQ 5X1 MITS (S)	
		IC119	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC120	0IRH620900B	IC, ROHM	BA6209N MOTOR DRIVER	
		IC301	0IS0129800A	IC, SONY	CXA1298AP REC EQ	
		IC303	0INE133000A	IC,NEC	UPC1330HA DECK R/P S/W,NEC	
		IC403	0IT0478700A	IC,TOSHIBA	TMP47C870N-4781CZ MICOM,T/B	
		IC404	0IMT572000B	IC, MITSUMI	PST572E TO-92 3.9V, MITUSMI	
		IC601	0IT0471660B	IC,TOSHIBA	TMP47C1660N-V568 MICOM,T/B	
		IC602	0ISA780500D	IC, SANYO	L78LR05C-MA VOL-REGU RESET	
		IC701	0ISA185100A	IC, SANYO	LA1851N IF+MPX FOR DTS SANYO	
		IC702	0ISA721800A	IC,SANYO	LC7218 PLL,SANYO	
		IC703	0INS780500B	IC,NATIONAL SEMICONDUCTOR	LM78L05ACZ VOLTAGE REGULATOR	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		IC801	0ISS920100B	IC,SAMSUNG SEMICONDUCTOR	KA9201D-30SDIP RF AMP,S/S	
		IC802	0ISS830900A	IC,SAMSUNG SEMICONDUCTOR	KAA8309-48QFP SERVO,S/S	
		IC803	0IPH131100A	IC,PHILIPS	TDA1311 DAC(SOT97DE8),PHILIPS	
		IC804	0IKE455800A	IC, KEC	KIA4558P 8DIP LIN OP-AMP	
		IC805	0ISS599000A	IC, SAMSUNG SEMICONDUCTOR	KS5990 DSP(CDP),S/S	
		IC806	0ISA652000A	IC, SANYO	LA6520 18W-PWR OP AMPSANYO (S)	
		IC807	0ISS925600A	IC, SAMSUNG SEMICONDUCTOR	KA9256 DRIVE CD S/S	
		IC808	0INS780500B	IC,NATIONAL SEMICONDUCTOR	LM78L05ACZ VOLTAGE REGULATOR	
		IC809	0IMI529400A	IC,MITSUBISHI	M5294P REG 5V(RESET),MITSUBIS	
		JK1	576-002A	JACK RCA	JACK,BLOCK S-437P-4P(WH/RD)(S)	
		JK2	561-100D	CONNECTOR	TERMIANL SPEAKER SP-026B	
		JK3	563-625E	CONNECTOR ASSY	ANTENNA TERMINAL PAT-638	
		JK3	572-334A	JACK 6.4	HLJ5315-01-4010 H=12.5 9PIN	
		LD101	0DL220000AA	DIODE LED	SLC22UR3,RD ROHM (S)	
		L101	636-603D	COIL CHOKE RF	INDUCTOR, F 11.5T(10D)	
		L101	637-008A	INDUCTOR	R-9124X,33MH(CAP-CORE)	
		L102	637-008A	INDUCTOR	R-9124X,33MH(CAP-CORE)	
		L201	636-603D	COIL CHOKE RF	INDUCTOR, F 11.5T(10D)	
		L201	637-008A	INDUCTOR	R-9124X,33MH(CAP-CORE)	
		L202	637-008A	INDUCTOR	R-9124X,33MH(CAP-CORE)	
		L301	634-610C	COIL OSCILLATOR	OSC TAPE 10(4.7MH)	
		L302	638-601C	COIL TRAP FM	COIL, TRAP 19KHZ (S)	
		L402	638-601C	COIL TRAP FM	COIL, TRAP 19KHZ (S)	
		L701	631-606D	COIL ANTENNA	RF LW 10(5.7MH) (S)	
		L702	631-610C	COIL ANTENNA	COIL RF MW 10	
		L703	634S038C	COIL OSCILLATOR	A7BR-K121030X2-KR=K TOKO	
		L704	634S038L	COIL OSCILLATOR	A7BR-K5792X=K TOKO	
		L705	647S014E	DISCRIMINATOR	292TEA-K5504Z=K	
		L706	637-601D	INDUCTOR	INDUCTOR, F 20.8MH (S)	
		L707	637-601D	INDUCTOR	INDUCTOR, F 20.8MH (S)	
		L708	637N010A	INDUCTOR	RC-875 (0732-000-017) 393K	
		L709	644S038C	TRANS	7MC-K402713N4-KR=K TOKO	
		L710	638-102A	COIL TRAP FM	COIL,MPX FILTER 19K, 38K (S)	
		L711	638S102A	COIL TRAP FM	T253AGG-K5003-KR=K TOKO	
		0J112	631T603F	COIL ANTENNA	4EAD CORE,BF45TS-2,6X6X0.8 TDK	
		0J112	672-002C	LEAD SET	TIN WIRE D=0.5 26M/M TAPPING	
		0J113	631T603F	COIL ANTENNA	4EAD CORE,BF45TS-2,6X6X0.8 TDK	
		0J114	631T603F	COIL ANTENNA	4EAD CORE,BF45TS-2,6X6X0.8 TDK	
		0J253	356-026C	PIN	PIN JUMP WIRE 15.0M/M	
		0J701	356-026C	PIN	PIN JUMP WIRE 15.0M/M	
		PN101	561-800L	CONNECTOR	WAFER,B TO B IL-SDA-12P-S2T2	
		PN102	561-800L	CONNECTOR	WAFER,B TO B IL-SDA-12P-S2T2	
		PN103	561-646G	CONNECTOR	CONNECTOR MLX 520110710,07PIN	
		PN107	561-646D	CONNECTOR	CONNECTOR MLX 520110410 04PIN	
		PN108	561-800L	CONNECTOR	WAFER,B TO B IL-SDA-12P-S2T2	
		PN109	561-716B	CONNECTOR	WAFER,G/S GIL-G-02P-S3L2-E (S)	
		PN110	561-636H	CONNECTOR	WIRE TRAP MX52012-0810 AN TYPE	
		PN112	561-646E	CONNECTOR	CONNECTOR MLX 520110510,05PIN	
		PN304	561-646F	CONNECTOR	CONNECTOR MLX 520110610,06PIN	
		PN305	561-645K	CONNECTOR	CNNECTOR MX 52004-1110 P=1.5	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		PN306	561-645M	CONNECTOR	MX52004-1310 P=1.5 WIRE TRAP	
		PN309	561-646E	CONNECTOR	CONNECTOR MLX 520110510,05PIN	
		PN703	561-650D	CONNECTOR	WAFER HANLIM FWP1145-04R D=1.5	
		ZD703	0DZ680009AE	DIODE ZENER	UZ-6.8BSC(TP-B),6.8V,UNIZON	
		PN801	561-711H	CONNECTOR	*WAFER,G/S GIL-S-08P-S2T2-EF	
		PN802	561-685H	CONNECTOR	WAFER,KOREA MOLEX 53014-0810	
		PN803	561-711D	CONNECTOR	*WAFER,G/S GIL-S-04P-S2T2-EF	
		PN804	561-711E	CONNECTOR	*WAFER,G/S GIL-S-05P-S2T2-EF	
		Q101	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q102	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q102	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q103	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q104	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q104	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q105	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q106	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q107	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q108	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q109	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q110	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q111	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q112	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q113	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q114	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q115	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q202	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q203	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q204	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q205	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q206	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q215	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q220	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q302	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q303	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q305	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q306	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q307	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q308	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q309	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q310	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q311	0TR130209AA	TRANSISTOR	KTD1302 MUTING TP,KEC	
		Q312	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q313	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q314	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q315	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q316	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q401	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q402	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q604	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q605	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		Q607	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q608	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q610	0TR127309AA	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q613	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q614	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q616	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q617	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q618	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q621	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q622	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q701	0TR127309AA	TRANSISTOR	KTA1273-TP-Y (KTA966A)KEC	
		Q701	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q702	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q702	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q703	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q703	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q704	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q704	0TR320509AB	TRANSISTOR	KTC3205-TP-Y (KTC2236A)KEC	
		Q709	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q710	0TR126609AA	TRANSISTOR	KTA1266-TP-Y (KTA1015) KEC	
		Q711	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q712	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q713	667T010C	FET	KTK30A-Y TAPE TO-92 KEC (S)	
		Q714	0TR319209AA	TRANSISTOR	KTC3192-O TP,KEC(KTC380TM-O)	
		Q715	0TR114009AA	TRANSISTOR	DTA114ES ROHM	
		Q718	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q719	0TR319809AA	TRANSISTOR	KTC3198-TP-Y (KTC1815)KEC	
		Q721	0TR320309AA	TRANSISTOR	KTC3203-TP-Y (KTC2120)KEC	
		Q722	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q723	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q724	0TR114009AE	TRANSISTOR	DTC114TS-TP S/W ROHM	
		Q801	0TR126609AB	TRANSISTOR	KTA1266-GR TP,KEC(KTA1015GR)	
		Q802	0TR319809AE	TRANSISTOR	KTC3198L-BL TP,KEC (KTC732TM)	
		Q803	0TR103009AE	TRANSISTOR	KRC103M TP,KEC(KRC1203)	
		Q805	0TR319809AE	TRANSISTOR	KTC3198L-BL TP,KEC (KTC732TM)	
		Q806	0TR319809AE	TRANSISTOR	KTC3198L-BL TP,KEC (KTC732TM)	
		Q807	0TR319809AE	TRANSISTOR	KTC3198L-BL TP,KEC (KTC732TM)	
		Q808	0TR103009AF	TRANSISTOR	KRA103M TP,KEC(KRA2203)	
		Q810	0TR103009AF	TRANSISTOR	KRA103M TP,KEC(KRA2203)	
		Q811	0TR103009AE	TRANSISTOR	KRC103M TP,KEC(KRC1203)	
		Q812	0TR103009AE	TRANSISTOR	KRC103M TP,KEC(KRC1203)	
		RM1	668-090R	INTEGRATED CIRCUIT	DJT-004 MODULE(38KHZ),D/J	
		RY101	557-021A	RELAY	RELAY, VB-12MB TAKAMISAWA	
		RY701	557-021A	RELAY	RELAY, VB-12MB TAKAMISAWA	
		R101	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R102	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R103	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R103	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R104	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R104	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R105	0RD1500F608	RESISTOR,FIXED CARBON FILM	150 1/6W 5 TA26	
		R105	0RD5603F608	RESISTOR,FIXED CARBON FILM	560K 1/6W 5 TA26	
		R106	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R107	0RD0472F608	RESISTOR,FIXED CARBON FILM	47 1/6W 5 TA26	
		R107	0RD1102G608	RESISTOR,FIXED CARBON FILM	11K 1/4W 5 TA26	
		R108	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R108	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		R109	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R110	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R110	0RD8203F608	RESISTOR,FIXED CARBON FILM	820K 1/6W 5 TA26	
		R111	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R111	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R112	0RD3302F608	RESISTOR,FIXED CARBON FILM	33K 1/6W 5 TA26	
		R113	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		R114	0RD8200G608	RESISTOR,FIXED CARBON FILM	820 1/4W 5 TA26	
		R115	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R116	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R117	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R118	0RD6802F608	RESISTOR,FIXED CARBON FILM	68K 1/6W 5 TA26	
		R119	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R120	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R121	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R121	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R122	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R122	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R123	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K 1/6W 5 TA26	
		R124	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R125	0RD1503F608	RESISTOR,FIXED CARBON FILM	150K 1/6W 5 TA26	
		R126	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R127	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R128	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R128	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R129	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R129	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R130	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R131	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R131	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R132	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K 1/6W 5 TA26	
		R132	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R133	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R133	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R134	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R134	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K 1/6W 5 TA26	
		R135	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K 1/6W 5 TA26	
		R140	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R141	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R142	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R143	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R144	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R145	0RD3300F608	RESISTOR,FIXED CARBON FILM	330 1/6W 5 TA26	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R146	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R147	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R148	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R149	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R150	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R151	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R152	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R153	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R154	0RD6800F608	RESISTOR,FIXED CARBON FILM	680 1/6W 5 TA26	
		R155	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R156	0RN0471J634	RESISTOR FIX METAL FILM	4.7 1W 5 MF15	
		R157	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R158	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R159	0RN0471J634	RESISTOR FIX METAL FILM	4.7 1W 5 MF15	
		R162	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R170	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R171	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R172	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R172	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R173	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R173	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R174	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R174	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R175	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R175	0RD6801G608	RESISTOR,FIXED CARBON FILM	6.8K 1/4W 5 TA26	
		R176	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		R176	0RD2702F608	RESISTOR,FIXED CARBON FILM	27K 1/6W 5 TA26	
		R177	0RD3300H634	RESISTOR,FIXED CARBON FILM	330 1/2W 5 MF15	
		R178	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R179	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R180	0RD3302G608	RESISTOR,FIXED CARBON FILM	33K 1/4W 5 TA26	
		R201	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R202	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R203	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R203	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R204	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R204	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R205	0RD1500F608	RESISTOR,FIXED CARBON FILM	150 1/6W 5 TA26	
		R205	0RD5603F608	RESISTOR,FIXED CARBON FILM	560K 1/6W 5 TA26	
		R206	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R207	0RD0472F608	RESISTOR,FIXED CARBON FILM	47 1/6W 5 TA26	
		R207	0RD1102G608	RESISTOR,FIXED CARBON FILM	11K 1/4W 5 TA26	
		R208	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R208	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		R209	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R210	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R210	0RD8203F608	RESISTOR,FIXED CARBON FILM	820K 1/6W 5 TA26	
		R211	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R211	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R212	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	

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SET PART NO : 112-303C

RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R212	0RD3302F608	RESISTOR,FIXED CARBON FILM	33K 1/6W 5 TA26	
		R213	0RD1502G608	RESISTOR,FIXED CARBON FILM	15K 1/4W 5 TA26	
		R215	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R215	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R216	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R216	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R217	0RD1502F608	RESISTOR,FIXED CARBON FILM	15K 1/6W 5 TA26	
		R217	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R218	0RD1001G608	RESISTOR,FIXED CARBON FILM	1.0K 1/4W 5 TA26	
		R218	0RD6802F608	RESISTOR,FIXED CARBON FILM	68K 1/6W 5 TA26	
		R219	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R219	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R220	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R220	0RD1803F608	RESISTOR,FIXED CARBON FILM	180K 1/6W 5 TA26	
		R221	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R221	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R222	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R222	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R223	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K 1/6W 5 TA26	
		R224	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R225	0RD1001G608	RESISTOR,FIXED CARBON FILM	1.0K 1/4W 5 TA26	
		R225	0RD1503F608	RESISTOR,FIXED CARBON FILM	150K 1/6W 5 TA26	
		R226	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R226	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R227	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R228	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R228	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R229	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R229	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R230	0RD1000G608	RESISTOR,FIXED CARBON FILM	100 1/4W 5 TA26	
		R230	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R231	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R231	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R232	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R232	0RD2202G608	RESISTOR,FIXED CARBON FILM	22K 1/4W 5 TA26	
		R234	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R235	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K 1/6W 5 TA26	
		R240	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R241	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R242	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R243	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R244	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R245	0RD3300F608	RESISTOR,FIXED CARBON FILM	330 1/6W 5 TA26	
		R246	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R247	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R248	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R249	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R250	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R251	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R252	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R253	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R254	0RD6800F608	RESISTOR,FIXED CARBON FILM	680 1/6W 5 TA26	
		R255	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R256	0RN0471J634	RESISTOR FIX METAL FILM	4.7 1W 5 MF15	
		R257	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R259	0RN0471J634	RESISTOR FIX METAL FILM	4.7 1W 5 MF15	
		R261	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R262	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R270	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R271	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R272	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R272	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R273	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R273	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R274	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R275	0RD0822H634	RESISTOR,FIXED CARBON FILM	82 1/2W 5 MF15	
		R277	0RD3300H634	RESISTOR,FIXED CARBON FILM	330 1/2W 5 MF15	
		R278	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R305	0RD2201G608	RESISTOR,FIXED CARBON FILM	2.2K 1/4W 5 TA26	
		R308	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R309	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R310	0RD1004F608	RESISTOR,FIXED CARBON FILM	1.0M 1/6W 5 TA26	
		R313	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R371	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R375	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R376	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R377	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R378	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R380	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R381	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K 1/6W 5 TA26	
		R382	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R387	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R388	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R389	0RD0102G608	RESISTOR,FIXED CARBON FILM	10 1/4W 5 TA26	
		R390	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R391	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R393	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R396	0RD3902F608	RESISTOR,FIXED CARBON FILM	39K 1/6W 5 TA26	
		R397	0RD3902F608	RESISTOR,FIXED CARBON FILM	39K 1/6W 5 TA26	
		R398	0RD3302F608	RESISTOR,FIXED CARBON FILM	33K 1/6W 5 TA26	
		R399	0RD3302F608	RESISTOR,FIXED CARBON FILM	33K 1/6W 5 TA26	
		R410	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R411	0RD2402F608	RESISTOR,FIXED CARBON FILM	24K 1/6W 5 TA26	
		R411	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R412	0RD1000G608	RESISTOR,FIXED CARBON FILM	100 1/4W 5 TA26	
		R412	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R413	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R413	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R414	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R415	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R416	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R417	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R418	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R419	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R421	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R422	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R423	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R424	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R425	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R426	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R427	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R428	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R429	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R430	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R431	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R432	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R433	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R434	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R435	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R442	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R451	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R452	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R453	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R454	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R455	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R456	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R457	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R458	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R459	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R460	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R461	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R462	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R463	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R493	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R500	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R611	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R615	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R616	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R617	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R618	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R619	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R621	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R622	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	
		R623	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R624	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R626	0RD3902F608	RESISTOR,FIXED CARBON FILM	39K 1/6W 5 TA26	
		R627	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R628	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R629	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R630	0RD2701F608	RESISTOR,FIXED CARBON FILM	2.7K 1/6W 5 TA26	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R631	0RD1801F608	RESISTOR,FIXED CARBON FILM	1.8K 1/6W 5 TA26	
		R632	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R641	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R642	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R643	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R644	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R645	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R646	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R647	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R648	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R649	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R650	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R651	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R652	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R653	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R654	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R655	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R656	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R668	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R669	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R675	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R676	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R680	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R681	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R689	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R690	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R691	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R695	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R701	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R701	0RD2201G608	RESISTOR,FIXED CARBON FILM	2.2K 1/4W 5 TA26	
		R702	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R702	0RD4701G608	RESISTOR,FIXED CARBON FILM	4.7K 1/4W 5 TA26	
		R703	0RD2201G608	RESISTOR,FIXED CARBON FILM	2.2K 1/4W 5 TA26	
		R704	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R704	0RD1500H634	RESISTOR,FIXED CARBON FILM	150 1/2W 5 MF15	
		R705	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R705	0RD2201G608	RESISTOR,FIXED CARBON FILM	2.2K 1/4W 5 TA26	
		R706	0RD2201G608	RESISTOR,FIXED CARBON FILM	2.2K 1/4W 5 TA26	
		R706	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R707	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R707	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R708	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R708	0RD1200H634	RESISTOR,FIXED CARBON FILM	120 1/2W 5 MF15	
		R709	0RD1202G608	RESISTOR,FIXED CARBON FILM	12K 1/4W 5 TA26	
		R709	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R710	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R711	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R712	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R718	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R721	0RD1000F608	RESISTOR,FIXED CARBON FILM	100 1/6W 5 TA26	

「REPLACEMENT PARTS LIST」

MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R722	0RD5600F608	RESISTOR,FIXED CARBON FILM	560 1/6W 5 TA26	
		R723	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R725	0RD1200F608	RESISTOR,FIXED CARBON FILM	120 1/6W 5 TA26	
		R726	0RD3300F608	RESISTOR,FIXED CARBON FILM	330 1/6W 5 TA26	
		R727	0RD1000F608	RESISTOR,FIXED CARBON FILM	100 1/6W 5 TA26	
		R728	0RD2702F608	RESISTOR,FIXED CARBON FILM	27K 1/6W 5 TA26	
		R729	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R730	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R731	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R732	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R733	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R734	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R735	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R736	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R737	0RD1202F608	RESISTOR,FIXED CARBON FILM	12K 1/6W 5 TA26	
		R738	0RD5601F608	RESISTOR,FIXED CARBON FILM	5.6K 1/6W 5 TA26	
		R739	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R740	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R742	0RD5601G608	RESISTOR,FIXED CARBON FILM	5.6K 1/4W 5 TA26	
		R743	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K 1/6W 5 TA26	
		R744	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K 1/6W 5 TA26	
		R745	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R746	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R747	0RD2200F608	RESISTOR,FIXED CARBON FILM	220 1/6W 5 TA26	
		R748	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R749	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R752	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R757	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R758	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R759	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R760	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R763	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R764	0RD1501F608	RESISTOR,FIXED CARBON FILM	1.5K 1/6W 5 TA26	
		R765	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R766	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R767	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R768	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R769	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R770	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R781	0RD4700F608	RESISTOR,FIXED CARBON FILM	470 1/6W 5 TA26	
		R786	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R787	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R788	0RD6201F608	RESISTOR,FIXED CARBON FILM	6.2K 1/6W 5 TA26	
		R789	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R790	0RD1000F608	RESISTOR,FIXED CARBON FILM	100 1/6W 5 TA26	
		R791	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R801	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R802	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R803	0RD8201F608	RESISTOR,FIXED CARBON FILM	8.2K 1/6W 5 TA26	
		R804	0RD1602F608	RESISTOR,FIXED CARBON FILM	16K 1/6W 5 TA26	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R805	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R806	0RD1001G608	RESISTOR,FIXED CARBON FILM	1.0K 1/4W 5 TA26	
		R807	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R808	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R809	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R810	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R811	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R812	0RD1802F608	RESISTOR,FIXED CARBON FILM	18K 1/6W 5 TA26	
		R813	0RD1303F608	RESISTOR,FIXED CARBON FILM	130K 1/6W 5 TA26	
		R814	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R815	0RD6801F608	RESISTOR,FIXED CARBON FILM	6.8K 1/6W 5 TA26	
		R816	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R817	0RD5103F608	RESISTOR,FIXED CARBON FILM	510K 1/6W 5 TA26	
		R818	0RD8202F608	RESISTOR,FIXED CARBON FILM	82K 1/6W 5 TA26	
		R819	0RN2201F408	RESISTOR,FIX METAL FILM	2.20K 1/6W 1% TA26	
		R820	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R821	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R823	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R824	0RN1003F408	RESISTOR FIX METAL FILM	100K 1/6W 1 TA26	
		R825	0RN1003F408	RESISTOR FIX METAL FILM	100K 1/6W 1 TA26	
		R826	0RD0912F608	RESISTOR,FIXED CARBON FILM	91 1/6W 5 TA26	
		R827	0RD0222G608	RESISTOR,FIXED CARBON FILM	22 1/4W 5 TA26	
		R828	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R829	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R830	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R831	0RD2703F608	RESISTOR,FIXED CARBON FILM	270K 1/6W 5 TA26	
		R832	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R834	0RD3302F608	RESISTOR,FIXED CARBON FILM	33K 1/6W 5 TA26	
		R835	0RD0221F608	RESISTOR,FIXED CARBON FILM	2.2 1/6W 5 TA26	
		R836	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R837	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R838	0RD5602F608	RESISTOR,FIXED CARBON FILM	56K 1/6W 5 TA26	
		R839	0RD3901F608	RESISTOR,FIXED CARBON FILM	3.9K 1/6W 5 TA26	
		R840	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R841	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R842	0RD0102F608	RESISTOR,FIXED CARBON FILM	10 1/6W 5 TA26	
		R843	0RD0221F608	RESISTOR,FIXED CARBON FILM	2.2 1/6W 5 TA26	
		R844	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R845	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R846	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R849	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R850	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R851	0RD1004F608	RESISTOR,FIXED CARBON FILM	1.0M 1/6W 5 TA26	
		R852	0RD2202F608	RESISTOR,FIXED CARBON FILM	22K 1/6W 5 TA26	
		R853	0RD1003G608	RESISTOR,FIXED CARBON FILM	100K 1/4W 5 TA26	
		R854	0RD1004F608	RESISTOR,FIXED CARBON FILM	1.0M 1/6W 5 TA26	
		R855	0RD2201F608	RESISTOR,FIXED CARBON FILM	2.2K 1/6W 5 TA26	
		R860	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R861	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R862	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		R863	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R864	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R865	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R867	0RD1002G608	RESISTOR,FIXED CARBON FILM	10K 1/4W 5 TA26	
		R868	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R870	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R871	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R872	0RD3301F608	RESISTOR,FIXED CARBON FILM	3.3K 1/6W 5 TA26	
		R875	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R876	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R877	0RD5602F608	RESISTOR,FIXED CARBON FILM	56K 1/6W 5 TA26	
		R878	0RD5602F608	RESISTOR,FIXED CARBON FILM	56K 1/6W 5 TA26	
		R879	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R880	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R881	0RD5600F608	RESISTOR,FIXED CARBON FILM	560 1/6W 5 TA26	
		R882	0RD5600F608	RESISTOR,FIXED CARBON FILM	560 1/6W 5 TA26	
		R883	0RD4703F608	RESISTOR,FIXED CARBON FILM	470K 1/6W 5 TA26	
		R884	0RD4703F608	RESISTOR,FIXED CARBON FILM	470K 1/6W 5 TA26	
		R885	0RD1800F608	RESISTOR,FIXED CARBON FILM	180 1/6W 5 TA26	
		R886	0RD1800F608	RESISTOR,FIXED CARBON FILM	180 1/6W 5 TA26	
		R887	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R888	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R889	0RD4700F608	RESISTOR,FIXED CARBON FILM	470 1/6W 5 TA26	
		R890	0RD4700F608	RESISTOR,FIXED CARBON FILM	470 1/6W 5 TA26	
		R891	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R894	0RD1000G608	RESISTOR,FIXED CARBON FILM	100 1/4W 5 TA26	
		R895	0RD1000G608	RESISTOR,FIXED CARBON FILM	100 1/4W 5 TA26	
		R896	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R897	0RD4701F608	RESISTOR,FIXED CARBON FILM	4.7K 1/6W 5 TA26	
		R898	0RD1003F608	RESISTOR,FIXED CARBON FILM	100K 1/6W 5 TA26	
		R901	0RD1002F608	RESISTOR,FIXED CARBON FILM	10K 1/6W 5 TA26	
		R902	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R903	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R904	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R905	0RD4702F608	RESISTOR,FIXED CARBON FILM	47K 1/6W 5 TA26	
		R920	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R921	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K 1/6W 5 TA26	
		R922	0RD1001F608	RESISTOR,FIXED CARBON FILM	1.0K 1/6W 5 TA26	
		R923	0RD1201F608	RESISTOR,FIXED CARBON FILM	1.2K 1/6W 5 TA26	
		R999	0RD1000F608	RESISTOR,FIXED CARBON FILM	100 1/6W 5 TA26	
		SR101	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR102	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR201	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR202	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR301	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR302	0RV1154D230	VARIABLE RESISTOR,CARBON FILM	150K 6 ST P3 L2.5 5	
		SR401	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR402	0RV1154D230	VARIABLE RESISTOR,CARBON FILM	150K 6 ST P3 L2.5 5	
		SR601	613S008A	RESISTOR SEMI-FIXED	EVN-D8N A02 BQ3 (4.7KB) STICK	
		SR801	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	

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S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		SR802	613S008D	RESISTOR SEMI-FIXED	EVN-D8N A02 B14 (10KB) STICK	
		SR803	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR804	613S008J	RESISTOR SEMI-FIXED	EVA-D8N A02 BE4 (22KB) STICK	
		SR805	613S008B	RESISTOR SEMI-FIXED	EVN-D8N A02 B13 (1KB) STICK	
		SW1	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW10	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW101	558-026I	SWITCH SPECIAL	TACT JTP-1236A JEIL	
		SW11	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW12	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW13	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW14	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW15	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW16	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW17	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW18	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW2	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW20	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW21	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW22	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW23	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW24	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW26	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW27	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW29	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW3	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW32	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW33	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW34	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW35	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW36	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW37	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW38	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW39	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW4	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW40	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW41	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW42	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW43	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW44	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW45	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW46	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW5	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW6	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW601	552-639B	SWITCH SLIDE	SSSJ823GA013	
		SW602	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW603	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW604	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW605	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW606	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW607	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	

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MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		SW621	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW622	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW623	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW624	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW625	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW626	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW627	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW628	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW629	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW630	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW631	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW632	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW633	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW650	552-023C	SWITCH SLIDE	SSSB022SA013	
		SW7	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW8	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		SW9	558T026A	SWITCH SPECIAL	TACT EVQ-114 04M H=4.3 TP	
		TC701	623-001F	TRIMMER	TRIMMER, C CVN620 DONG-KUK (S)	
		TC702	623-001E	TRIMMER	TRIMMER,C CVN610 DONG-KUK (S)	
		TC703	623-001F	TRIMMER	TRIMMER, C CVN620 DONG-KUK (S)	
		TC704	623-001E	TRIMMER	TRIMMER,C CVN610 DONG-KUK (S)	
		TP2	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP3	561-656C	CONNECTOR	WAFER HAN LIM FW-0640-03A N-N	
		TP701	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP703	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP704	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP705	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP801	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP802	561-656B	CONNECTOR	WAFER HAN FIM FW-0640-02A (N-N	
		TP803	561-656C	CONNECTOR	WAFER HAN LIM FW-0640-03A N-N	
		TP804	561-656E	CONNECTOR	WAFER HAN RIM FW-0640-05A(N-N)	
		TUN1	521-026D	TUNER RADIO CAR	FM,FE407-G60 FTZ MITSUMI	
		T701	641-816Z	TRANS POWER	115/230V 50/60HZ TK KS	
		VC701	0DD123600AB	DIODE	,VARACTOR KV1236Z2 TOKO	
		VC702	0DD123600AB	DIODE	,VARACTOR KV1236Z2 TOKO	
		VR102	612-634D	RESISTOR SLIDE	RS15V123D-20KWX2 C/C	
		VR103	612-634D	RESISTOR SLIDE	RS15V123D-20KWX2 C/C	
		VR104	612-634D	RESISTOR SLIDE	RS15V123D-20KWX2 C/C	
		VR105	612-634D	RESISTOR SLIDE	RS15V123D-20KWX2 C/C	
		VR106	612-634D	RESISTOR SLIDE	RS15V123D-20KWX2 C/C	
		VR107	612-634E	RESISTOR SLIDE	RS15V123D-100KWX2 C/C	
		VR108	611-646G	RESISTOR VARIABLLE	RK16Y12MA 2M253B	
		VR701	613S008C	RESISTOR SEMI-FIXED	EVN-D8N A02 BE3 (2.2KB) STICK	
		X401	617-602T	CRYSTAL	4.1943MHZ(20PF)	
		X601	616-020P	FILTER CERAMIC	CSA6.00MGU MURATA	
		X701	617T602D	CRYSTAL	7.2MHZ	
		X801	616-020T	FILTER CERAMIC	CSA8.46MT MURATA	
		ZD101	0DZ150009EA	DIODE,ZENER	MTZ15-C T-77 15V TP,ROHM/K	
		ZD102	0DZ510009HA	DIODE,ZENER	MTZ5.1-B T-77 5.1V TP,ROHM/K	
		ZD201	0DZ150009EA	DIODE,ZENER	MTZ15-C T-77 15V TP,ROHM/K	

[REPLACEMENT PARTS LIST]

MODEL : FFH-303L BG3 SET PART NO : 112-303C RUN-DATE : 92.04.02

S	AL	LOCA.NO	PART NO(GS)	DESCRIPTION	SPECIFICATION	REMARKS
		ZD401	0DZ680009AE	DIODE ZENER	UZ-6.8BSC(TP-B),6.8V,UNIZON	
		ZD402	0DZ680009AE	DIODE ZENER	UZ-6.8BSC(TP-B),6.8V,UNIZON	
		ZD405	0DZ560009FA	DIODE,ZENER	MTZ5.6-B T-77 5.6V TP,ROHM/K	
		ZD701	0DZ100009FA	DIODE,ZENER	MTZ10-C T-77 10V TP,ROHM/K	
		ZD701	0DZ240009EB	DIODE ZENER	UZ24BM,0.5W,UNIZON,TP	
		ZD702	0DZ560009BA	DIODE ZENER	UZ5.6BM,0.5W,UNIZON,TP	
		ZD702	0DZ680009AE	DIODE ZENER	UZ-6.8BSC(TP-B),6.8V,UNIZON	
		ZD703	0DZ680009AC	DIODE ZENER	UZ6.8BM,0.5W,UNIZON,TP	

*** END OF DATA ***